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VOL. 86 NO. 9

textile bulletin

SEPTEMBER • 1960

A Preview Of
The Greenville Show

The Textile Outlook: Good and Bad . . . 69
How About A Carding Machine To Produce 100 Pounds An Hour . . 93
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BPA NBP

Over 130 West Point Pacesetters sold since introduction prove

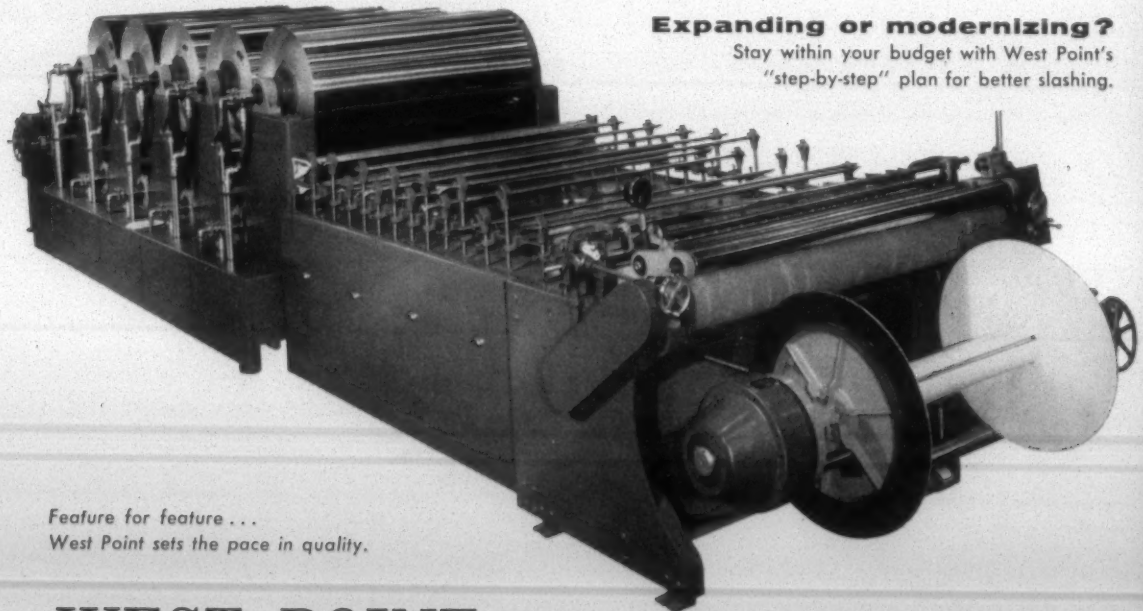
WEST POINT LEADS . . .

☑ **in quality.** West Point's Pacesetter multi-cylinder slasher features the largest cylinder journals, the largest bearings, the largest sprockets, the heaviest frame, the greatest access to warp, a high-capacity versatile size box, and a rugged head end with the best and simplest beam drive.

☑ **in sales.** Since its introduction in late 1958, more than 130 West Point Pacesetter slashers have been ordered by leading mills. An overwhelming preference for the long-range value of the West Point Pacesetter.

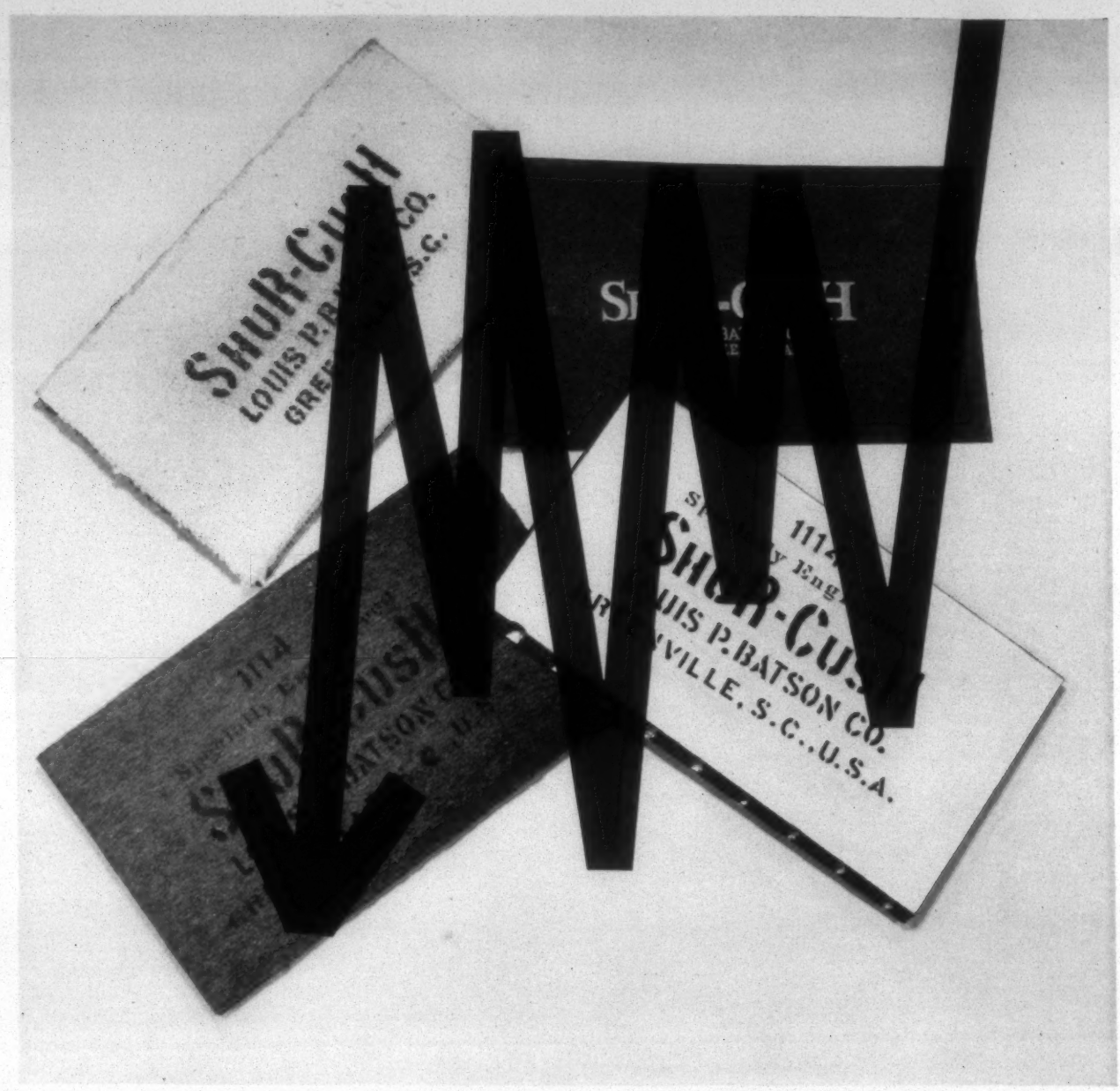
☑ **in installations.** West Point leads the field with more than 200 modern slasher installations in the last four years. We hope you will be able to visit several of these and see for yourself why West Point's Pacesetter is the outstanding slasher in the textile industry today.

Expanding or modernizing?
Stay within your budget with West Point's "step-by-step" plan for better slashing.



Feature for feature . . .
West Point sets the pace in quality.

WEST POINT Foundry & Machine Company
WEST POINT, GEORGIA



HERE'S WHY YOU SHOULD ALWAYS SPECIFY BATSON'S SHUR-CUSH PRECOATED OR PLAIN FOR ALL VIBRATION ABSORPTION:

1. Complete quality range . . . from the cheapest that's good to the best that's made. Quality mountings are re-usable when machine is re-located.
2. Complete thickness range . . . from 1/32" to 2".
3. Complete density range.
4. Complete size range. Batson's complete cutting facilities mean you can order: cut-to-size, odd sizes and shapes, rolls, sheets, strips.
5. ShuR-CusH available precoated or plain.

   Apply precoated with its own pressure-sensitive adhesive on both sides.

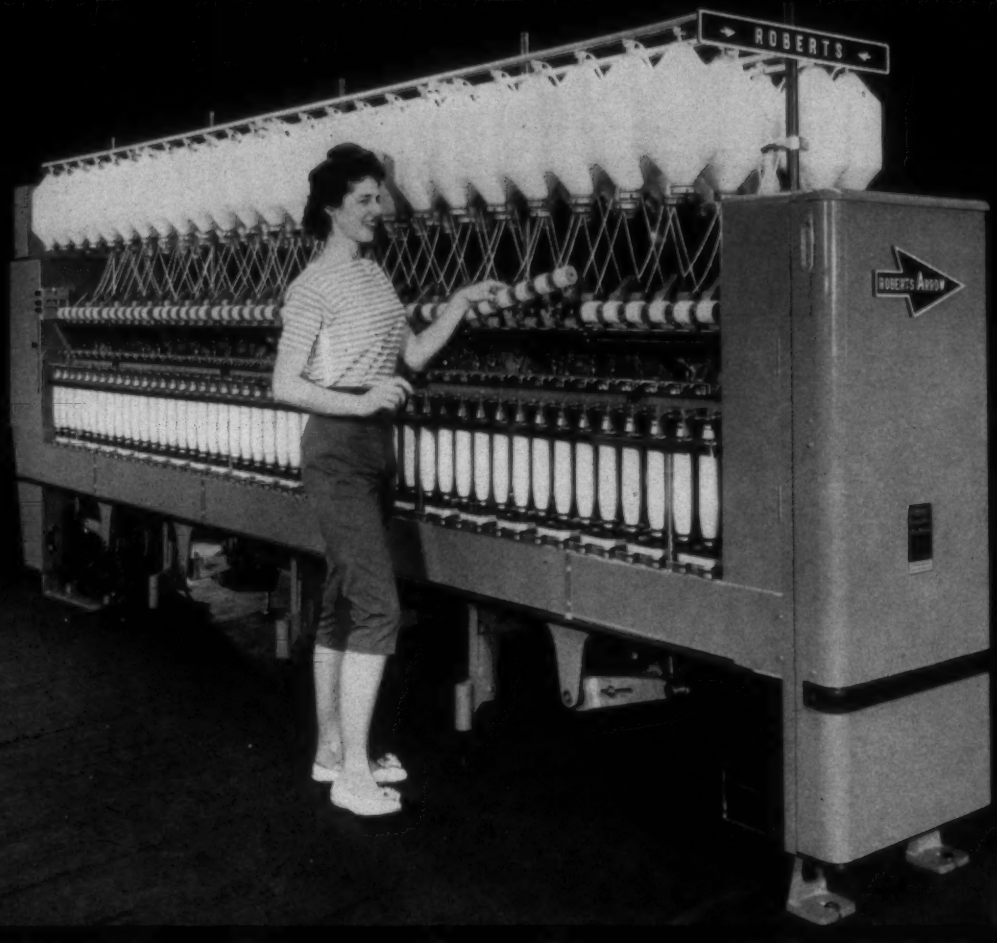
   Apply plain ShuR-CusH with Batson's ShuR-CusH Adhesive. Maintains bond and actually improves with age because it contains no asphalt derivative to harden and reduce absorbability of mounting.
6. Prompt delivery. Batson always has a complete range of ShuR-CusH in stock ready to rush to you promptly when you need it!



Louis P. Batson Company

P.O. Box 772, Greenville, S.C.

ROBERTS ARROW SPINNING



Spindle Speeds Over 13,000!

One of the most frequent questions asked today concerns high spindle speeds. The answer comes from many of the 850 Roberts Arrow Spinning Frames running in leading mills since 1956. Three examples are shown at the right.

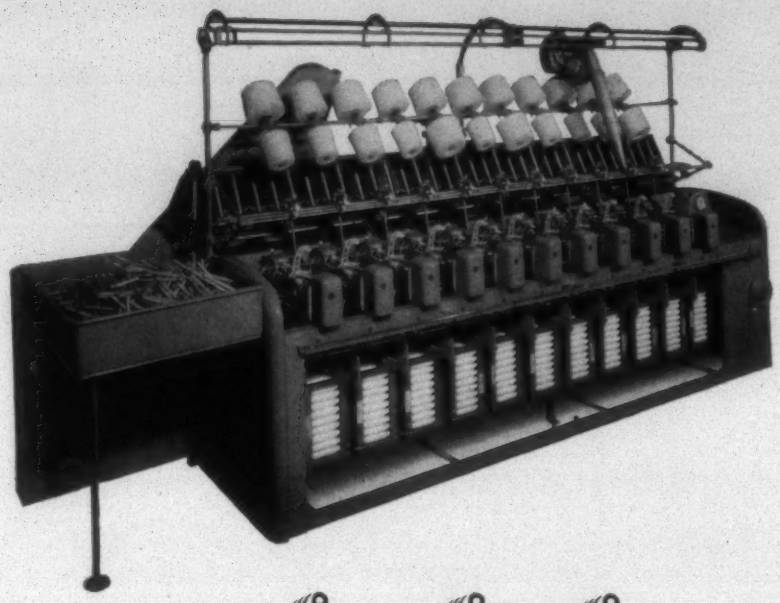
The new and refined Arrow compares advantageously with all other all-ball-bearing frames and greatly outperforms all conventional and standard-type spinning frames. The Arrow offers the greatest dollar-for-dollar-value against any other make of frame in dependable performance, lowest initial cost, and maintenance-free operation.

Arrow Spinning is available for either the cotton or the worsted system for natural or man-made fibers or blends.

3 MILLS RUNNING ARROW FRAMES AT 12,300 to 13,200 R.P.M.

- A major sheet manufacturer runs 36's warp yarn with 2" ring at 12,300 r.p.m. spindle speed on 44 Arrow frames.
- A major manufacturer of Dacron-cotton fabrics runs 50's on 66 Arrow frames with a 1-7/8" ring at 13,200 r.p.m. spindle speed.
- A major broadcloth manufacturer using 96 Arrow frames makes 40's with a 1-13/16" ring at 12,800 r.p.m. spindle speed.

ROBERTS COMPANY
SANFORD, NORTH CAROLINA



Schlafhorst

AUTOCOPSER

Established in all its versions in scores of American textile plants as the most flexible and most economical quilling operation . . .

SERVOLOOM AUTOCOPSER . . . to wind cotton and spun synthetics for the Draper Automatic Filling Magazine . . .

BOXING AUTOCOPSER . . . to wind worsteds, woolens, blends, cottons and spun synthetics . . .

CONTINOFIL AUTOCOPSER . . . to wind all spun and continuous filament yarns.

On exhibit at the . . .

SOUTHERN TEXTILE EXPOSITION

Textile Hall, Greenville, S.C., Oct. 3-7, 1960 . . . together with a new member of the Schlafhorst Family . . . the Schlafhorst **AUTOCONER** . . .

Both sold and serviced by The Terrell Machine Company, Charlotte, N.C.

THE TERRELL MACHINE COMPANY, CHARLOTTE, N.C.

TERRELL PRESENTS



Terrell presents the Schlafhorst **AUTOCONER** . . . for knitting . . . dyeing . . . warping . . . quilling . . . weaving . . . the ultimate in high-speed, fully automatic, completely versatile cone — or cheese winding . . . The first public showing will be held at the . . .

SOUTHERN TEXTILE EXPOSITION

Textile Hall, Greenville, S.C., Oct. 3-7, 1960.

The Schlafhorst **AUTOCONER** will be in full operation . . .

Also be sure and see the famous Schlafhorst **AUTOCOPSER** . . . both sold and serviced in the United States and Canada by the Terrell Machine Company, Charlotte, N.C.

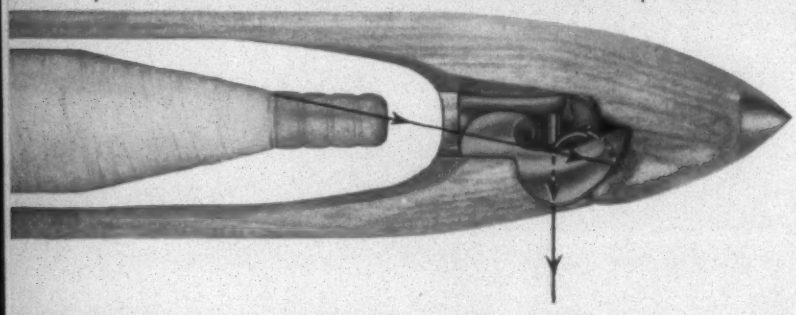
THE TERRELL MACHINE COMPANY, CHARLOTTE, N.C.

AT LAST!

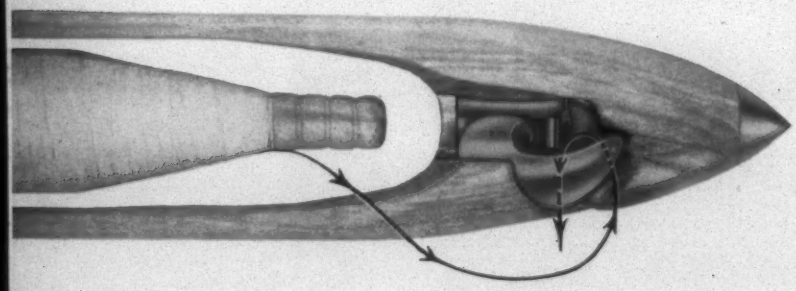
THE SHUTTLE EYE THAT CAN'T UNTHREAD



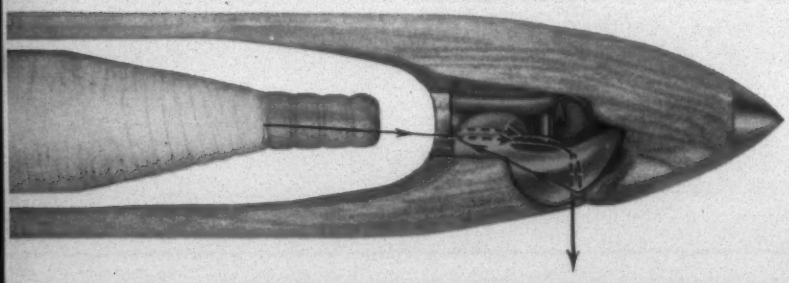
The #112 "McHargue" Eye just simply cannot let the yarn out, no matter how much it balloons, loops, twists and tangles. The Patented construction (U.S. Patent #2659395) keeps the yarn always within the eye, to fall back into normal position at the next pass of the shuttle. This eye was developed by mill men to overcome these most difficult problems.



Here are typical examples: When the eye is threaded, filling can be lifted completely out over top of the eye, and will rethread immediately.



With the yarn completely out over top of the eye, yarn can be "sawed" on hook and will not unthread. When filling is pulled it will fully rethread immediately.



Yarn can be fully looped on eye, around scroll point and hook, and it will rethread immediately at the next pass of the shuttle. Many other faults in yarn passage are overcome just as easily.

The #112 "McHargue" Eye has proved its value through years of testing in numerous high production mills, and is truly "worth its weight in gold." Order your next Southern Shuttles with the new Patented #112 "McHargue" Eye and see how quickly they will save you money by preventing down time and seconds from broken, twisted yarn. Or, ask one of our qualified Sales Engineers to show how you can effect savings and improve production.

STEEL HEDDLE MFG. CO. Philadelphia, Pa.

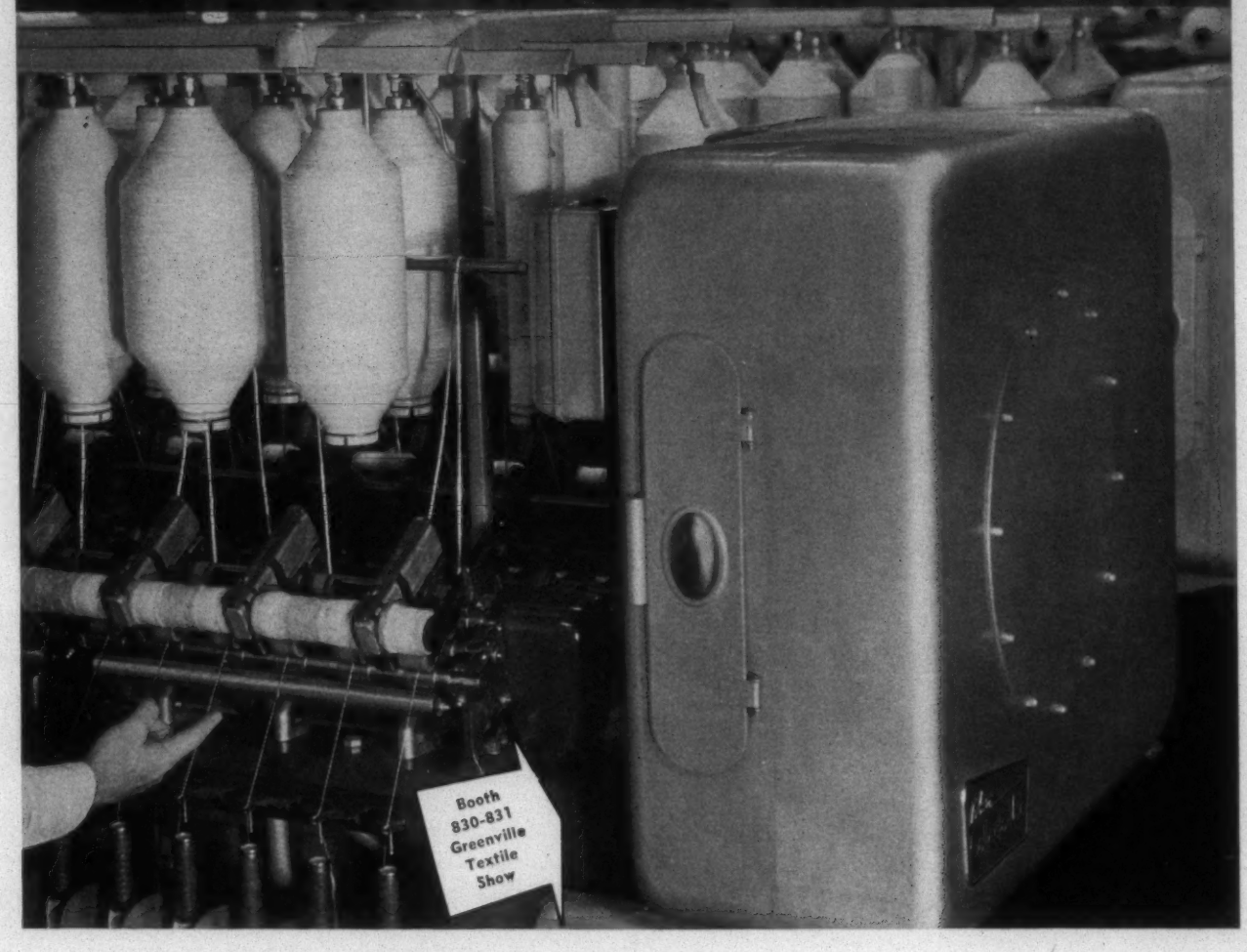
SOUTHERN SHUTTLES DIVISION Greenville, S. C.

Other Plants and Offices: Granby, Quebec, Canada • Lawrence, Mass. • Greensboro, N.C.
Atlanta, Ga. • Textile Supply Co., Dallas, Texas • Albert R. Breen, Chicago, Ill.

(S-6007)

You get additional operating profits with Built-in Economy Features

of BAHNSON COLLECTO-VAC



You can plan for additional operating profits with the extra quality design features of Bahnson's Collecto-Vac for collecting broken ends, lint and fly. Its anodized aluminum flutes neither crack nor warp, thus eliminating replacement costs . . . its rugged all-steel collection box provides durable service indefinitely . . . its scroll type fan gives maximum air handling, helps air distribution in the room by dispersing motor alley heat . . . it has quick, easy access for maintenance.

Collecto-Vac's superior construction enables it to reduce ends down more efficiently, to minimize slubs and gouts, to keep frames and room cleaner. Ask any mill man who has Bahnson Collecto-Vac. Fill in the coupon below for free informative bulletin.

Clip coupon to letterhead. Mail today for Free Illustrated Bulletin 30A.

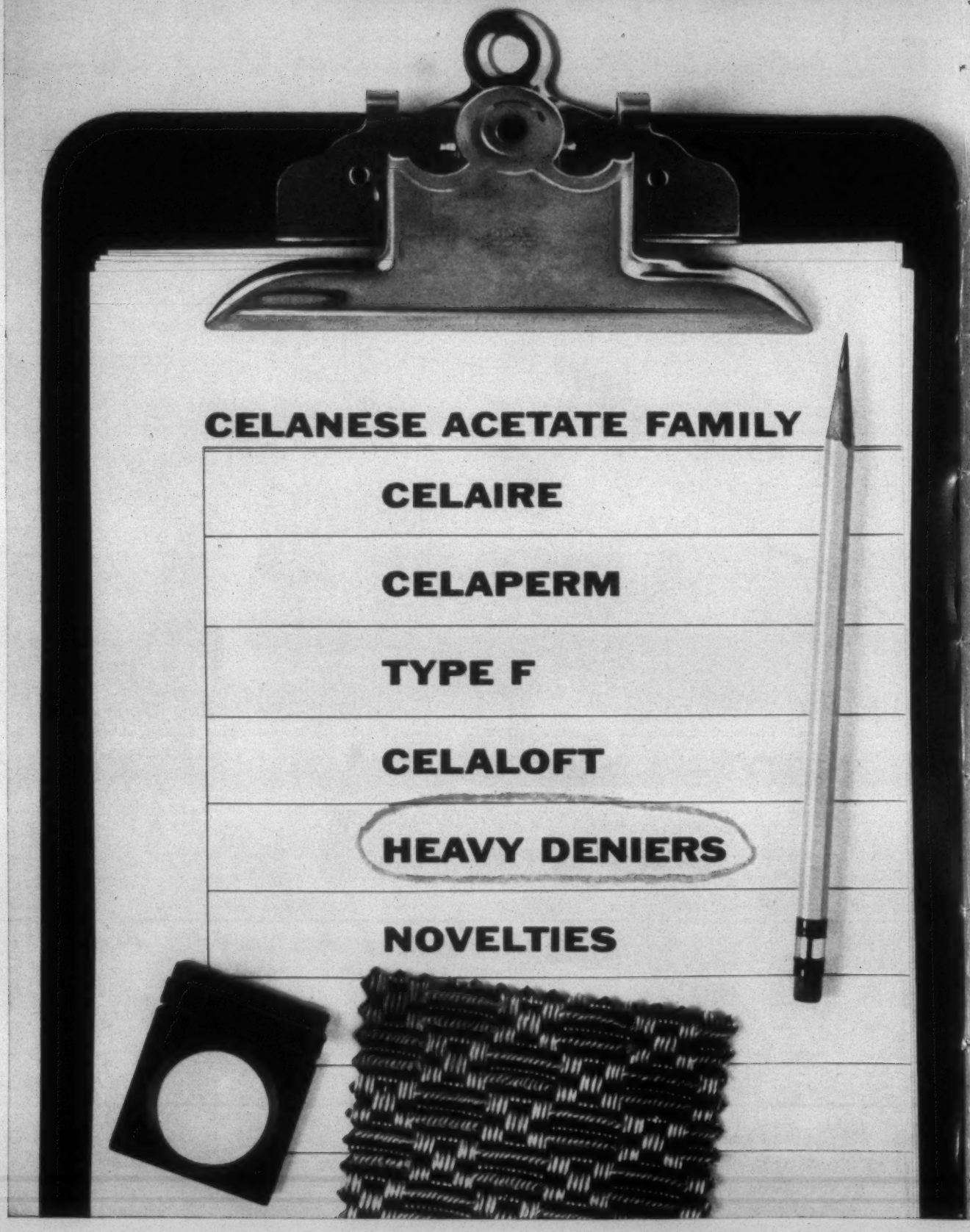
Name_____

Bahnson

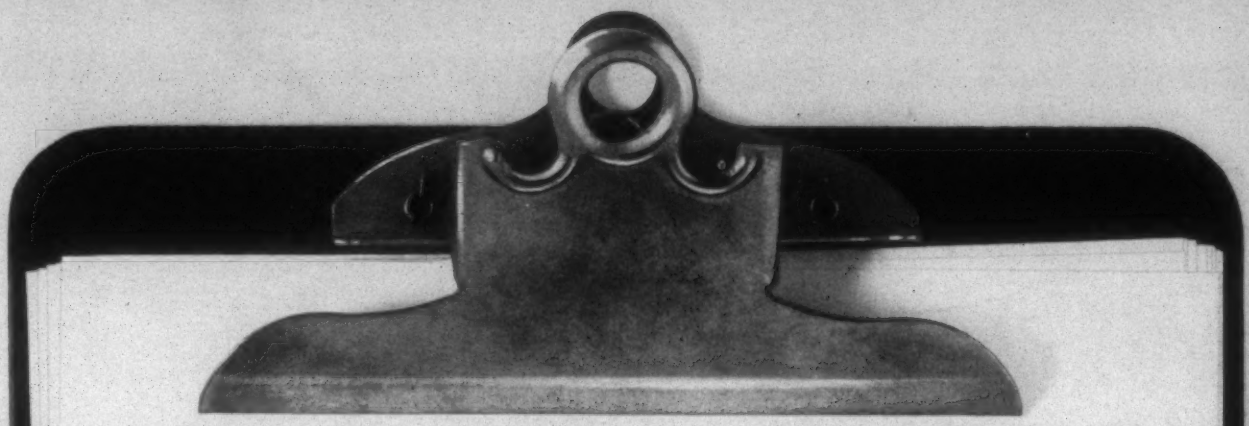
AIR-O-MATION

THE BAHNSON COMPANY • WINSTON-SALEM, N. C.

ACETATE....one


CELANESE ACETATE FAMILY
CELAIRE
CELAPERM
TYPE F
CELALOFT
HEAVY DENIERS
NOVELTIES

of today's most versatile textile fibers



HEAVY DENIER ACETATE is specifically engineered by Celanese to provide positive advantages in upholstery fabrics. It adds the bloom and beauty that are immediately appealing to consumers. The quality is outstanding. What's more, it's priced to meet the volume market. And it has the excellent uniformity that permits top economy in plant operation.

900, 1800, 2700 and 3000 deniers are available in this type of yarn. New fabric constructions with heavy deniers have a broad future and Celanese is always interested in working with you in their development. Celanese Fibers Company, Box 1414, Charlotte 1, N. C.

Celanese® Celaire® Celaloft® Celaperm® Type F T.M.

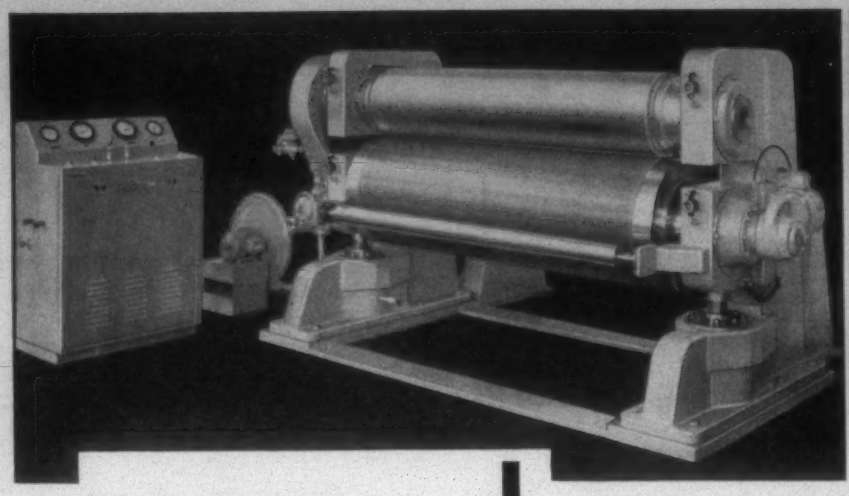
Celanese Fibers Company is a division of Celanese Corporation of America.

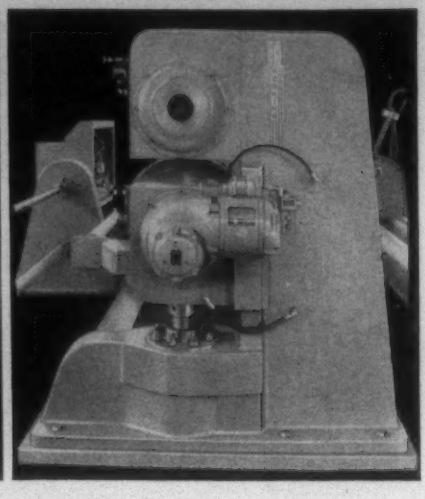
Acetate...a Celanese contemporary fiber

DISTRICT SALES OFFICES: 180 Madison Avenue, New York 16, N. Y.; 15 N. Broadway, Des Plaines, Ill.; Western Merchandise Mart., Room 478, San Francisco, Calif.; P. O. Box 1414, Charlotte 1, N.C.; 200 Boylston St., Chestnut Hill 67, Mass.; 3130 Maple Drive, N.E., Atlanta 5, Ga.

EXPORT SALES: Amcel Co., Inc., and Pan Amcel Co., Inc., 180 Madison Ave., New York 16.

IN CANADA: Chemcell Fibers Limited, 1600 Dorchester Street West, Montreal, Quebec.

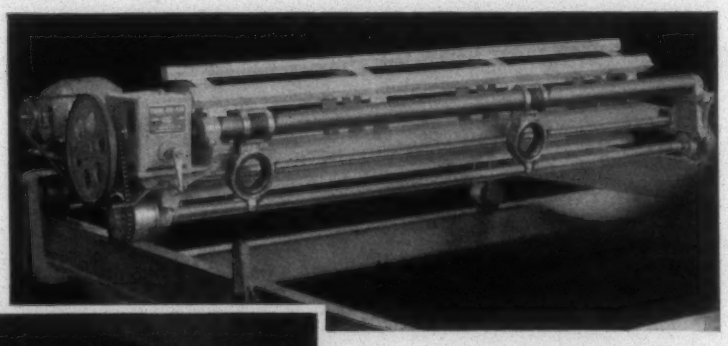




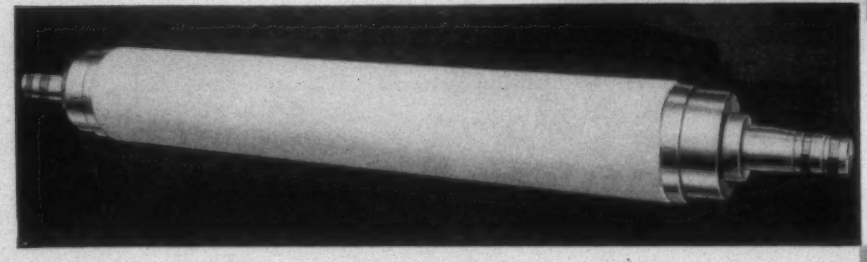
WORLD-WIDE ACCEPTANCE

Perkins Calenders, individually designed and custom-made, have long been known for their high factor of safety, simplicity of design and long record of service.

The 2-Roll 60-Ton Hydraulic Schreiner Calender is equipped with self aligning bearings and the Perkins patented bottom roll drive to keep both rolls rotating when skipping seams. The hydraulic unit enables individual pressure control of each side of the calender.

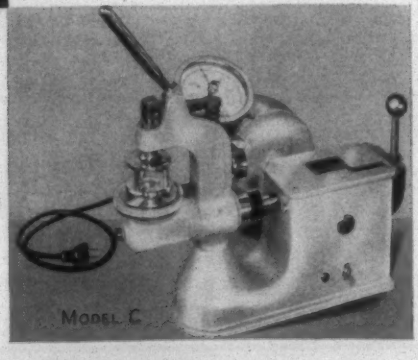


Perkins Bin Pilers are supplied with one, two, three or four traveling pot-eyes, and in widths up to 120". A real labor-saving unit — over 1,000 installed and operating.



PERKINS MULLEN TESTER

Mullen Testers are absolutely accurate, uniform and positive for ascertaining exact bursting strength of textiles.



When you specify Perkins Rolls, you enlist in your service more than the product of good equipment. You receive a plus factor — the outstanding ability of men whose skill and ingenuity has made Perkins the world leader in the roll industry.

Calender Rolls • Schreiner, Chasing, Rolling, Silk Finishing, and Embossing Calenders • Seam and Slub Detectors • Cloth Pilers • Automatic Winders • Hydraulic Power Units • Mullen Testers.

B. F. PERKINS & SON, INC. TEXTILE FINISHING MACHINERY

HOLYOKE • MASSACHUSETTS


Look what happened to
THE CORN WE TOOK OFF THE COB
Beauty is what happened.
Beauty and color and enduring charm . . . captured in textiles. We stand ready to supply your company with materials of highest quality—from the corn we took off the cob.
AB
STARCHES • DEXTRINES • GUMS
For warp sizing, finishing, printing and dyeing.
ANHEUSER-BUSCH, INC.
Bulk Corn Products Division
St. Louis, Missouri

Let's put our heads together about the New Developments in Weaving

At Booth No. 139
SOUTHERN
TEXTILE
EXPOSITION

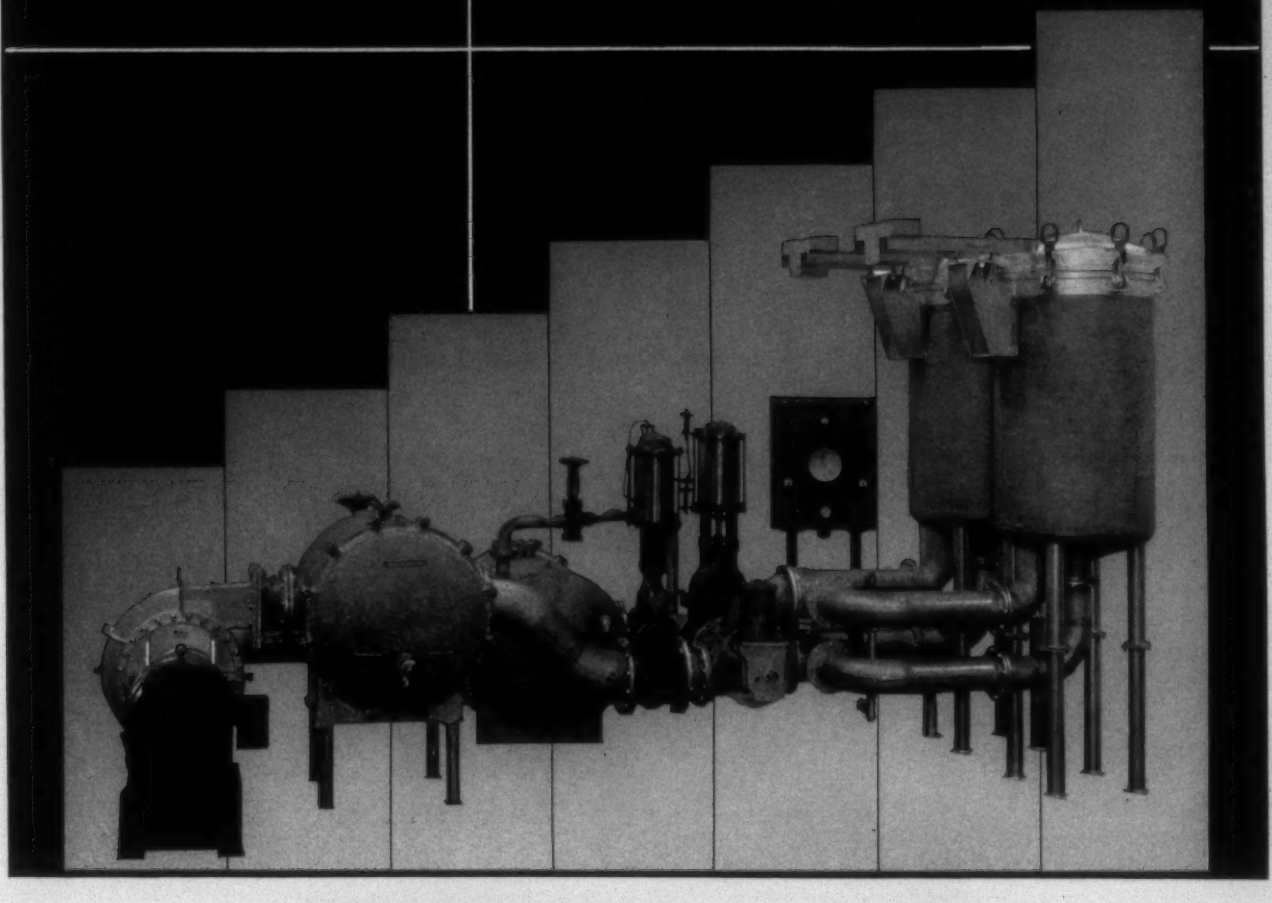
We are looking forward to seeing all of our friends at Greenville. Stop by and let us discuss the latest advancements in the art of weaving. We would like to give you a report on the new economies and improved quality that our fully automatic, all-electric, push button C-7 Looms are helping to make possible (the C-7, C-7S and C-7A) . . . plus further news of mutual interest about new developments in other C & K Looms.

CROMPTON & KNOWLES CORPORATION
C&K
WORCESTER, MASS. U.S.A.

Manufacturers of the World's Longest Line of Automatic Box Looms

Charlotte, N.C. • Allentown, Pa. • Crompton & Knowles, Jacquard Supply Co., Pawtucket, R.I. • Crompton & Knowles of Canada Limited, Montreal, Que.

OPERATING PRINCIPLES of Static Pressure Dryers



Without static pressure a yarn dryer must operate at atmospheric pressure (approx. 15 PSIA) or *one atmosphere.*

A 150 HP blower operating at full HP load has an inlet capacity of 4000 CFM. When operating at *one atmosphere* and 280° F such a blower will handle 250 lbs. per minute, by weight, of saturated air containing a maximum of 8000 B.T.U.

A static pressure dryer requires an average of 100 HP when operated at *5 atmospheres* (75 PSIA) and has an inlet capacity of 4000 CFM. If operated at 280° F, the blower will handle 5 times the weight of saturated air or 1,250 lbs. per minute containing a total of 40,000 B.T.U.

Drying is the process of evaporating moisture by heat. The static pressure dryer is more efficient since it provides 5 times the B.T.U. with 33 1/3 per cent less power consumption.

Fast dryers without static pressure are available. An interview with one of our experienced sales engineers will help you decide which type of drying is best for your needs.

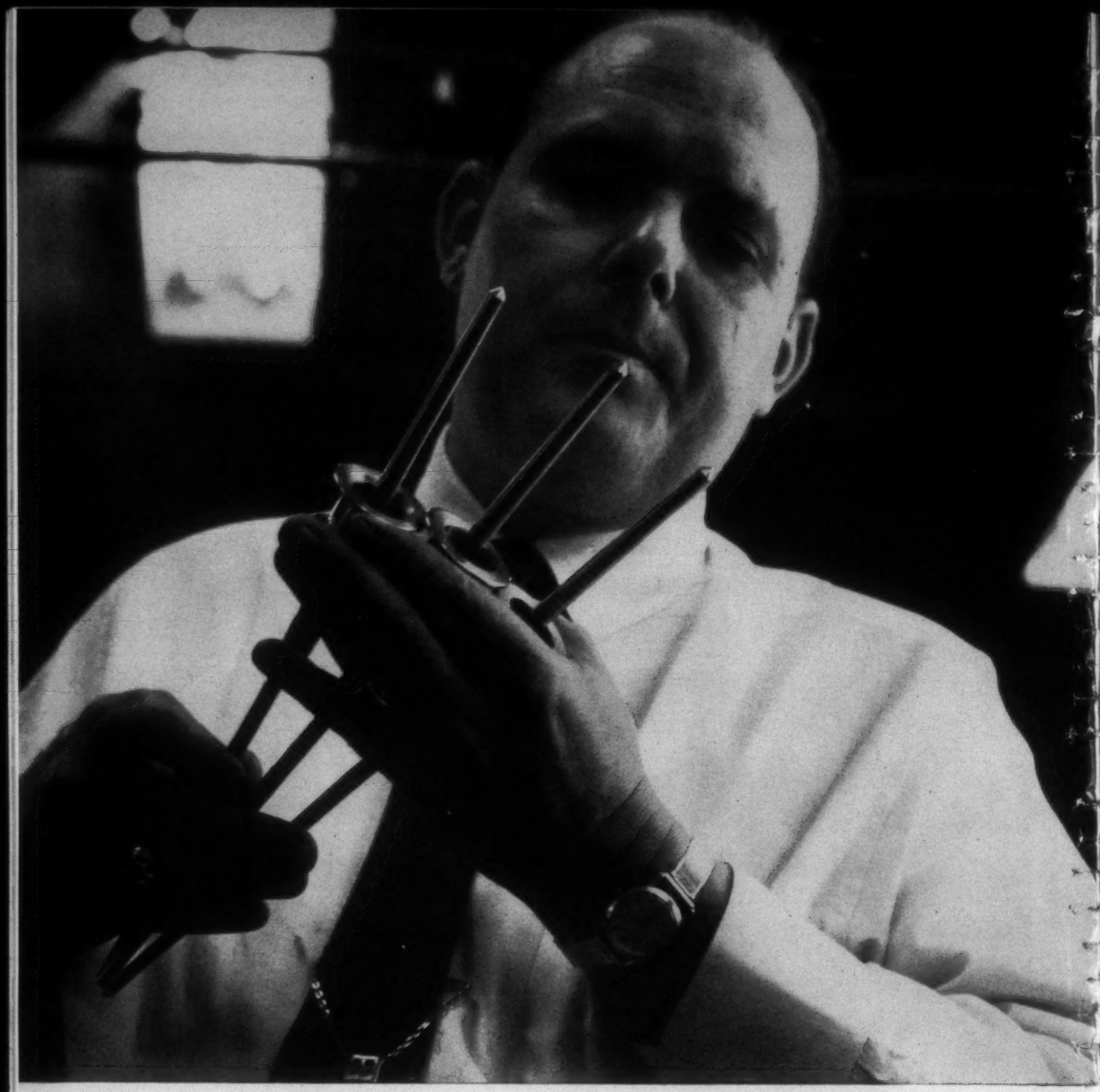
GASTON COUNTY

Gaston County Dyeing Machine Co.

WORLD'S LARGEST PRODUCER OF PRESSURE DYEING & DRYING MACHINERY

STANLEY, N. C., U.S.A.

Gaston Co. Dyeing Machine Co.	Albert P. March	J. R. Angel	A. R. Breen	The Rudel Machinery Co., Ltd.
Terminal Bldg., 68 Hudson Street	Flourtown, Pa.	1104 Mortgage Guarantee Bldg.	80 E. Jackson Blvd.	614 St. James Street, W., Montreal
Hoboken, N. J., G. Lindner, Mgr.	Philadelphia ADams 3-2901	Atlanta 3, Ga.	Chicago, Ill.	260 Fleet St., E., Toronto



Look alikes. Z. K. Kelly, Spinning Foreman, holds three clean spindles. Yet, only the left spindle is a new one. The center spindle is four years old, and the spindle on the right is five years old. Gulfspin keeps them looking new.

At Harriet & Henderson Cotton Mills, spindles clean after

GULF MAKES THINGS

For the past five years, Gulfspin lubricating oil has been used on all spindles in Harriet & Henderson's five cotton mills. "After spot-checking the spindles," says Mr. Z. K. Kelly, Spinning Foreman, Henderson Mill, Henderson, North Carolina, "we saw no reason to remove them. They were still clean after five years. So we decided to let them run and make periodic spot checks.

"We've seen what happens when spindles are lubricated poorly," says Mr. Kelly. "They turn black and corrode. And gum forms on them. This causes spindle drag, a lack of uniform twist-per-inch, and results in more ends down per thousand spindles. In short, it hurts product quality. But with Gulfspin on the job, we never worry about poor spindle lubrication."

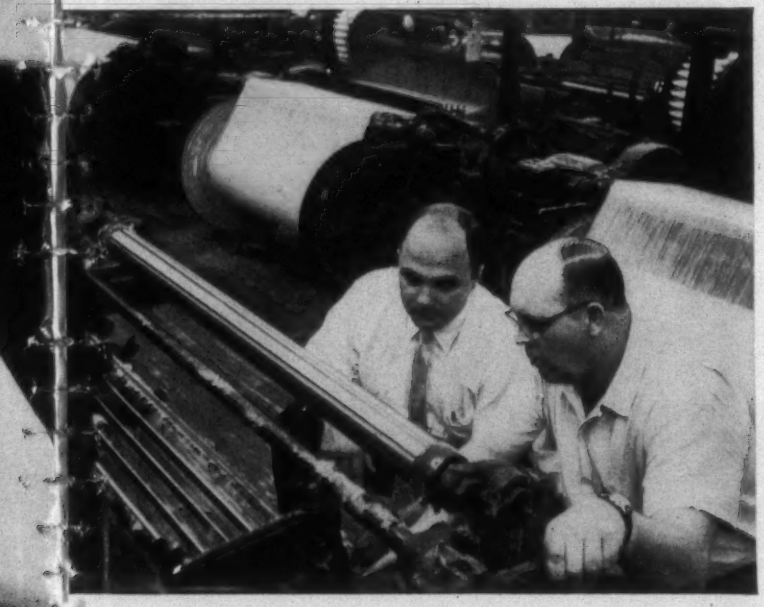
Mr. W. W. Bishop also had a lubrication problem. As Weaving Foreman in the Henderson Mill, he supervises



Monthly oil check. This spindle lube cart is loaded with Gulfspin lubricating oil. Foreman T. D. Peck uses it to check oil level every month in plain bearing spindles and every year in ball bearing spindles.



Roving frames. Gulfcrown Grease is used to lubricate bobbin and spindle drive gears. This lithium base, general purpose lubricant has helped Harriet & Henderson Cotton Mills reduce drive shaft replacements.



Checking a loom. Dan C. Austin, Gulf Sales Engineer, left, and W. W. Bishop, Weaving Foreman, talk over the performance of Gulfcrown Grease E.P. It's used on main drive cam surfaces—and it stays.



Two old pros. J. D. Cooper, right, President and General Manager, Harriet & Henderson Cotton Mills, Inc., and Gen. J. W. Jenkins, Gulf Distributor. "J. D." knows that he can get any Gulf lubricant in 30 minutes from the General's bulk plant.

5 years of lubrication with Gulfspin® oil

RUN BETTER!

production on 448 looms. "I had trouble getting grease to stay on main drive cam surfaces. But, then I started to lubricate them twice weekly with Gulfcrown® Grease E.P. Now, there's always grease on the cam surfaces."

May we have the opportunity to demonstrate how Gulf lubricating oils and greases can provide better protection for your textile mill equipment? Just contact your nearest Gulf office.

GULF OIL CORPORATION
Department DM, Gulf Building
Houston 1, Texas

GULF

ADAPTABLE



The CHAMELEON — symbol of adaptability to changing conditions

is the word for . . .
WHITIN CHANGEOVERS

. . . and they certainly are — adaptable to your needs and to your pocketbook! This is the simple success story of the Whitin line of spinning changeovers. Simple Conversion or a full scale Changeover — you have a wide choice of the *right* equipment — at the *right* price!

Whether your needs require an outlay of one, five, or fifteen or more dollars per spindle, you have the assurance that dollar for dollar you could not make a better investment toward improving both your product and your competitive position.

The drafting zone is the *profit* zone. The performance and efficiency of its elements are vital to profitable operation. Replace outdated and worn elements, such as cradles, bands, rolls, nose bars, etc. New and modern Whitin drafting systems offer more complete and accurate control of the fibers in the main drafting zone. The uniformity and the breaking strength of the yarn is improved. Lubrication is minimized or eliminated and maintenance and cleaning problems simplified.

Double apron systems with either long or short bottom aprons are available in combination with several streamlined weighting arrangements. Ball-bearing top rolls provide thousands of hours of trouble-free, worry-free production. Antifriction bottom rolls may be specified, as well as roll stands in several different angles of incline.

A staff of trained changeover specialists are at your service at our Charlotte Division, Charlotte, N. C. Upon request they will be glad to survey your equipment, examine your needs, and recommend exactly the changeover that is *right* for you.

WHITIN

Don't miss "Changeovers in Action" in our Booth No. 819 Annex 4 at the S.T.E., Greenville, S. C.

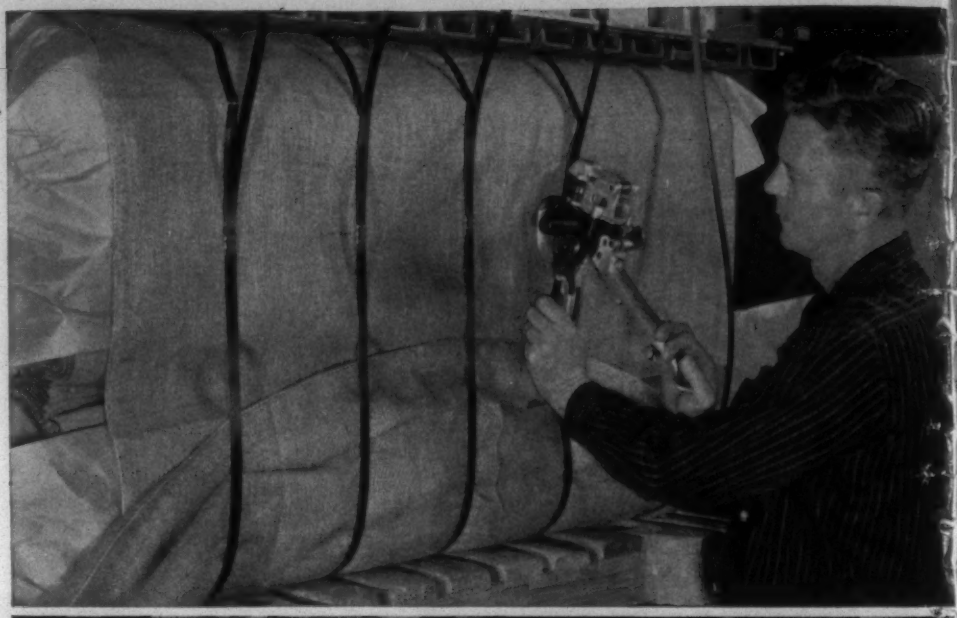
WHITIN MACHINE WORKS

WHITINSVILLE • MASSACHUSETTS

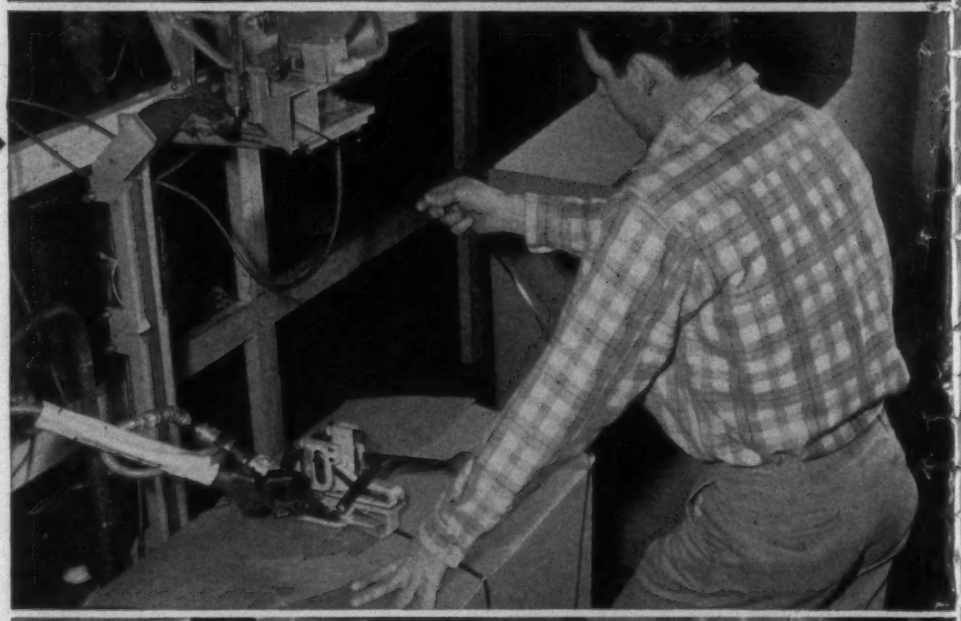
CHARLOTTE, N. C. • GREENSBORO, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.


Geigy Dyestuffs

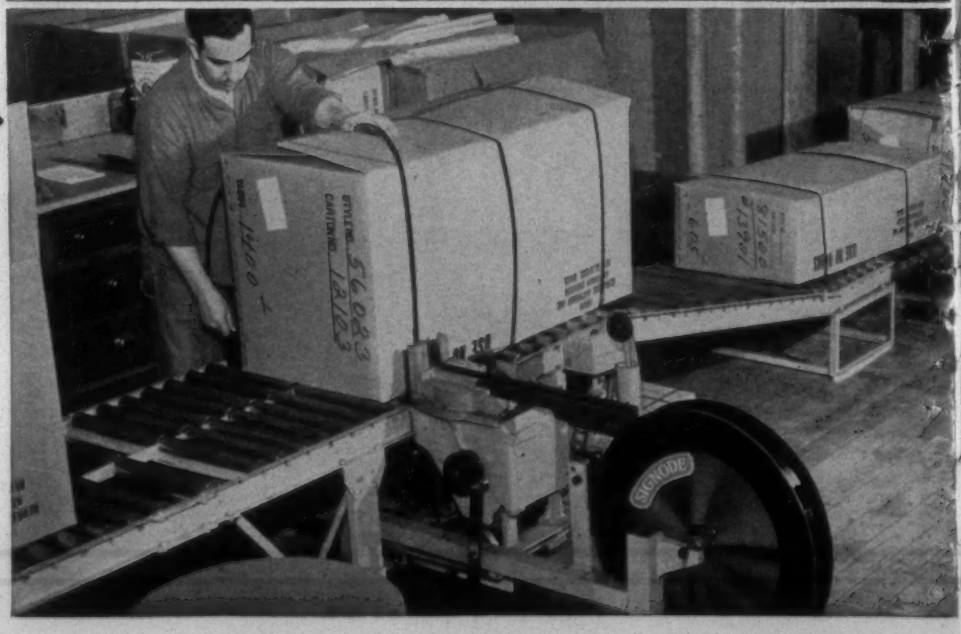
Signode Model SFC manually-operated seal feed strapping tool tensions, seals and scores strap at the seal for easy break-off with fast, smooth, one-arm movement. Weighs only 6½ lbs., and its almost perfect balance makes it easy to handle with one hand. In the illustration, the operator is using the SFC in the Signode strap-saver baling method, which reduces strap use by as much as 17%.

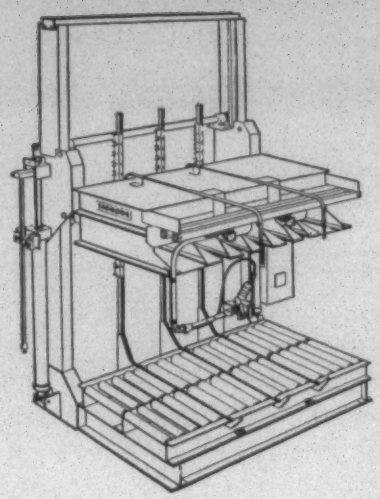


Signode Power Strap Feeder is a motorized, foot-pedal operated device for putting strap around big packages. It eliminates the need for a helper, enables one man to strap as many as 500 large cartons per day. Can be used with the Model AP strapping tool shown, or any of Signode's hand, air, or electric powered combination strapping tools.



Signode Power Strapping Machine automatically feeds, tensions, seals and severs the strap in seconds. One operator readily applies strapping more than fast enough for the highest production rates. May be used on cartons, bundles, boxes or bales of varying sizes, giving uniform pre-set tension at the touch of a foot pedal. Completely automatic strapping stations also available.





New Signode Compression Strapping Machine designed specifically for the textile industry makes tight, compact packages or bales that cost less to handle, store, ship and receive. It has a compression capacity of 2,000 pounds and is equipped to feed strap automatically around package or bale. Tensioning and sealing is done with any Signode hand-operated air or electric power combination strapping tool or machine. Resulting denser bales save as much as 7% of valuable space in storage and shipment.

Save Time, Money, Manpower ...the Signode Way

Signode can probably help you find ways to make substantial savings in time, money and manpower. Here are some of the reasons why we think so:

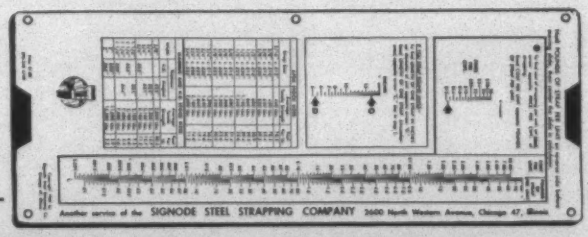
Our line of strapping equipment permits selection of the tool or machine that is right for the job. It includes hand tools, power tools, feeders, presses, and completely automatic machines. Our continuing program of product improvement is backed by 45 years of specialized experience.

The Signode man near you is experienced in the application of this equipment to textile strapping and packaging operations. He also can offer, if needed, the services of Signode's field engineering staff and extensive testing laboratories at no cost to you.

If you have not reviewed your strapping operations quite recently, it will almost certainly pay you to do so, with Signode. Potential savings go beyond the strapping operation....include savings for you in handling, storing, and shipping, plus savings for your customer.

The coupon below is for your convenience.

FREE! NEW Signode Steel Strapping Calculator helps you buy steel strapping at least cost according to your needs, and shows new strength figures for Signode steel strapping.



- ☐ Combination Strapping Tools
- ☐ Power Combination Strapping Tools and Feeders
- ☐ Air Power Tensioners & Sealers
- ☐ Compression Strapping Machines
- ☐ Power Strapping Machines
- ☐ Adjusta-Pak 3-way telescoping container
- ☐ We'd like to talk to the Signode man

SIGNODE

First in steel strapping

SIGNODE STEEL STRAPPING CO.

2665 N. Western Avenue, Chicago 47, Illinois

Please send new Signode Steel Strapping Calculator and additional information on the items checked.

NAME_____

FIRM_____

ADDRESS_____

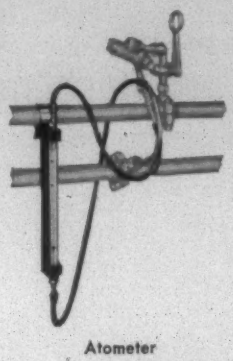
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Offices Coast to Coast • In Canada: Canadian Steel Strapping Co., Ltd., Montreal, Toronto

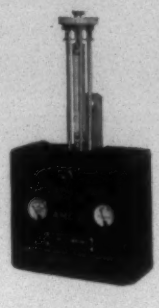
These Amco Air Condition Systems and Devices are designed for improving atmospheric conditions within your mill



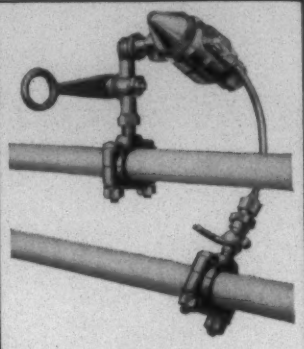
No. 6 Atomizer



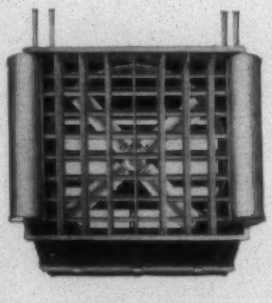
Atometer



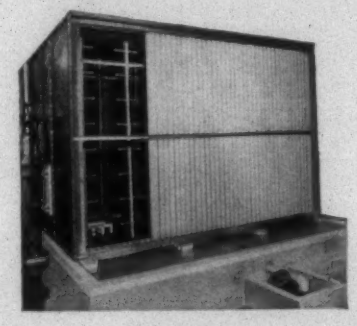
Humidity Control



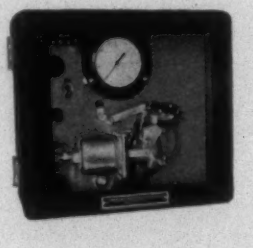
Aeromizer



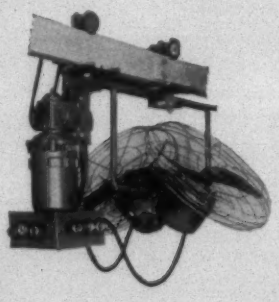
Evaporative Cooling Unit



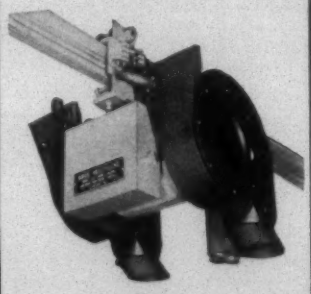
Air Washer



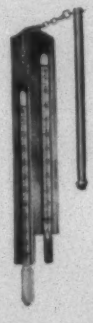
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Loom Cleaner



Sling Psychrometer



Blow-Thru Diaphragm Valve

See them at the 21st So. Textile Exposition at Greenville, N. C.
Oct. 3-7 • Booths 840-844

Amco Air Conditioning Devices are *quality* textile mill equipment . . . backed by a company with more than 70 years experience in solving textile air treatment problems. You can always rely on Amco to give you dependable advice and an expert installation best suited to your needs.

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Since 1888
Air Conditioning Equipment — Textile Specialties
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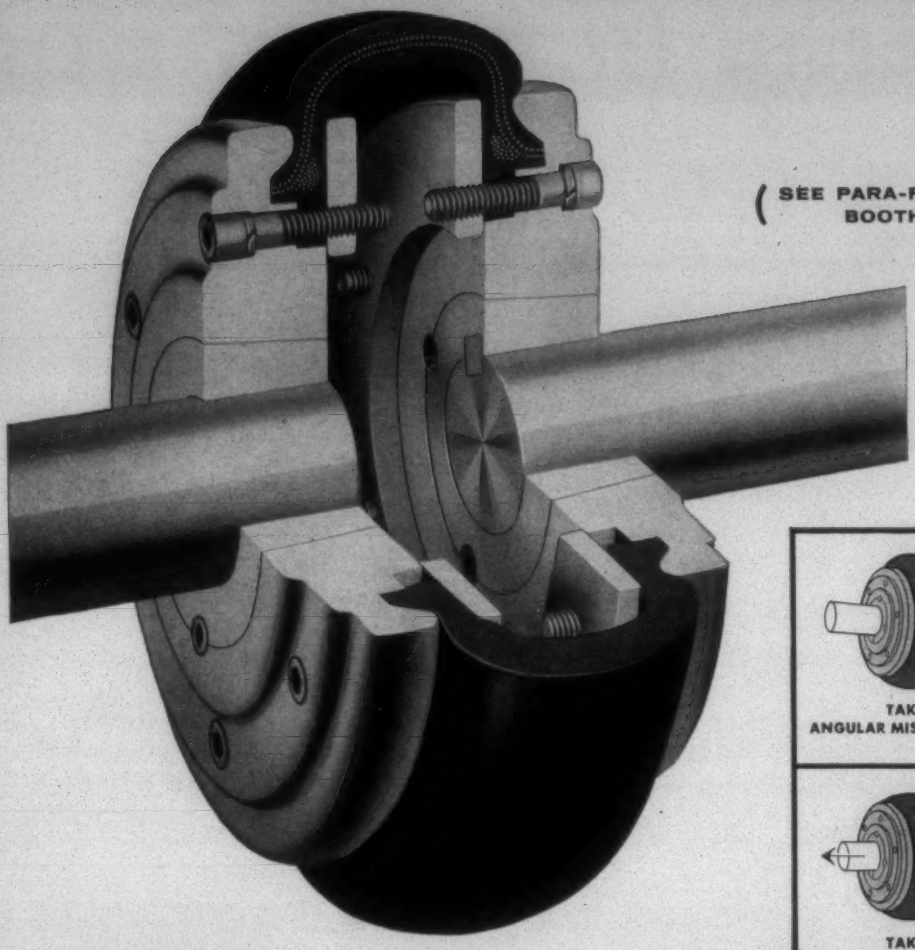
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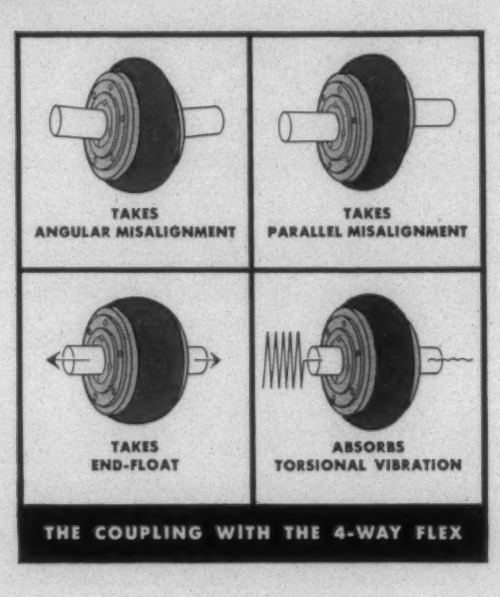
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GREENSBORO LOOM REED CO., INC.

Box 1375 GREENSBORO, N. C. Phone BRoadway 2-5678



(SEE PARA-FLEX AT GREENVILLE
BOOTH 404, ANNEX 1.)



DODGE

Para-flex

FLEXIBLE CUSHION COUPLING

THIS coupling "swallows up" shaft misplacements. It automatically compensates for end-float, parallel misalignment, angular misalignment *or any combination of all three.* Moreover, it cushions the stresses of shock loads. And it absorbs torsional vibration—reducing noise and protecting machinery from vibration's destructive forces.

Here is a new type of performance—made possible by the development of a tire-like flexing element. Synthetic tension members, bonded together in rubber, give this element the stamina and dependability of modern, high-speed, high-load, shock-absorbing truck tires—and the ability to respond magically to all manner of changing shaft conditions.

Para-flex takes minimum space on the shaft. Mounting is simplified through the use of standard Taper-Lock bushings—no reboring, no machining. Safety is promoted by flush design; there are no protruding parts. No lubrication is required, no periodic inspection. And since the flexible member is molded with a transverse split, it can be replaced *without moving either the driver or driven machine.*

Para-flex Couplings are stocked by Dodge Distributors in popular transmission sizes. They are available from factory stock in capacities up to 2000 hp at 1080 rpm. Call your distributor for a coupling to *make your own test.* You'll witness something revolutionary!

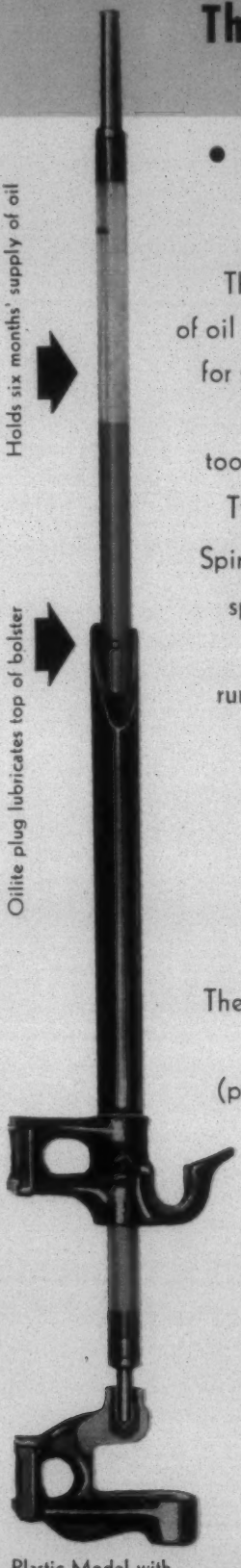
DODGE MANUFACTURING CORPORATION, 6700 Union, Mishawaka, Ind.



DODGE
of Mishawaka, Ind.

CALL THE TRANSMISSIONEER — your local Dodge Distributor. Factory trained by Dodge, he can give you valuable help on new, cost-saving methods. Look under "Dodge Transmissioneer" in the *white* pages of your telephone directory, or in the yellow pages under "Power Transmission Machinery."

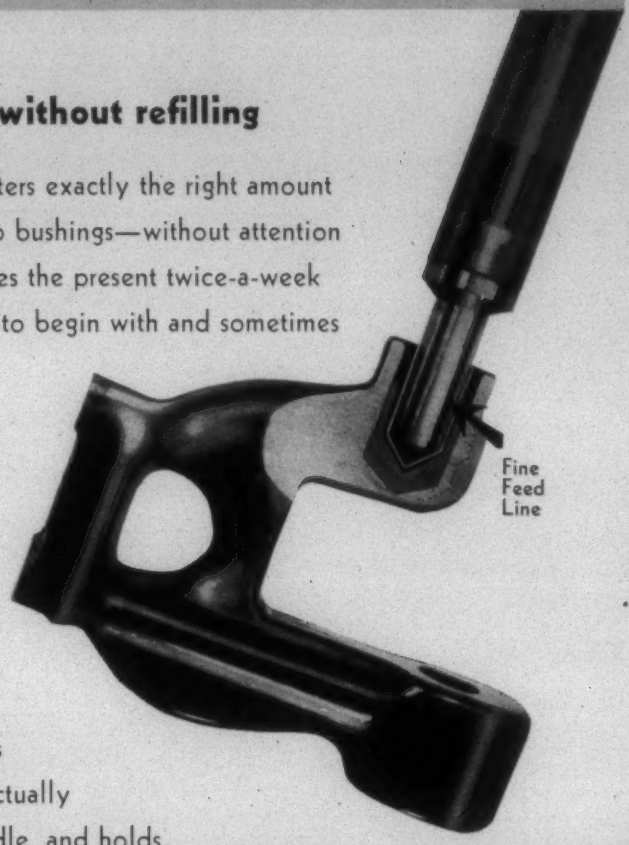
The New Ideal Self-Lubricating Roving Spindle



Plastic Model with cutaway of bolster and step

- **Meters oil as needed**
- **Runs 6 months without refilling**

This remarkable new spindle meters exactly the right amount of oil to spindle steps and bolster top bushings—without attention for six months or more. It eliminates the present twice-a-week haphazard oiling—too much to begin with and sometimes too little before the next oiling.



The Ideal Self-Lubricating Spindle greatly reduces wear on spindles, steps, and bolster bushings—assures free running at all times—saves on labor, on power, and on oil.

The spindle itself is a hollow steel tube which is hardened and ground and is actually stronger than a solid spindle, and holds enough oil for at least six months continuous running.

The spindle point and step are lubricated through a small opening in the point which meters out a tiny droplet of oil when its temperature reaches 100° (practically body temperature). The top bolster bushing is oiled by slow seepage through an oilite plug when the carriage reaches the end of the bottom stroke.

Let us show you how this Ideal Self-Lubricating Spindle will solve your oiling troubles and protect your equipment. Write or telephone for full information today.

Always enough oil—Never too much—6 months between refills

See it in Booths 239 and 240
Southern Textile Exposition

Ideal Machine Shops, Inc.

Bessemer City, N. C.

CONTINUOUS SERVICE TO TEXTILE MILLS SINCE 1925

NOW...FASTER,
LOWER COST SLASHING
MORE UNIFORM YARN SIZING



Photo Courtesy Prescott Warping & Warp Dye Corp.

NEW MANHATTAN SLASHER ROLLS ARE YOUR BEST BUY AT SQUEEZE AND DRESSING ROLL POSITIONS

ONLY MANHATTAN SLASHER ROLLS OFFER THIS COMBINATION OF FEATURES:

- Special synthetic rubber compounds control size pick-up to your requirements.
- Uniform, correct roll density assures *uniform, even* pick-up—the finish *you want.*
- Accurate metering of size permits substantial savings in starch costs.
- Distinctive red roll color permits faster, easier detection of yarn-end breaks.
- Keep perfect cushion *without* indentation—eliminate slasher downtime costs to maintain blankets.
- Roll end-caps prevent metal corrosion between cover and metal core.
- Provide highest resistance to starches, gums, softeners, oils or chemicals. Can be reground for longer life.

Let a Manhattan roll engineer show you how to get "More Use per Dollar" with Manhattan Slasher Rolls. Ask about the new Textractor and Texroc Rolls for maximum water removal and longer life on your mangles.

RM1058

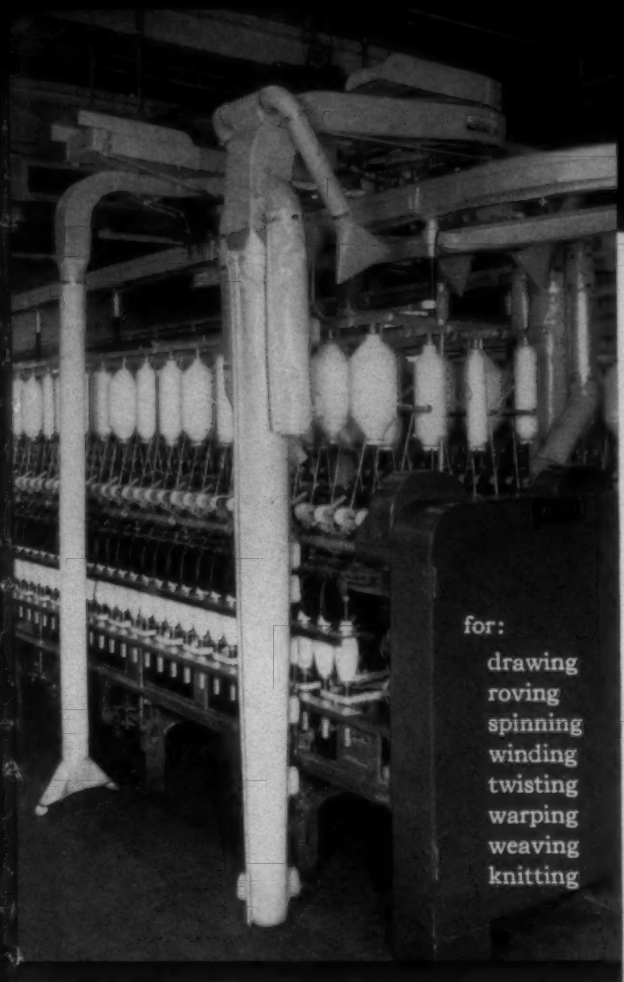
ENGINEERED RUBBER PRODUCTS ...MORE USE PER DOLLAR

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MANHATTAN RUBBER ROLL DIVISION • NORTH CHARLESTON, SOUTH CAROLINA

RAYBESTOS-MANHATTAN, INC.

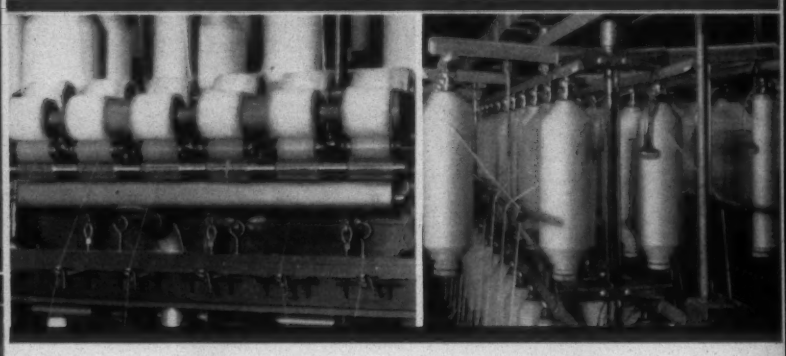
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Traveling Cleaners

BLOWING UNITS
for machines and room surfaces

COOPERATING VACUUM UNITS
with automatic disposal





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Quality equipment
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Atomizer humidification
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with and without refrigeration

Greenville
Booth 502

419



Parks-Cramer Company

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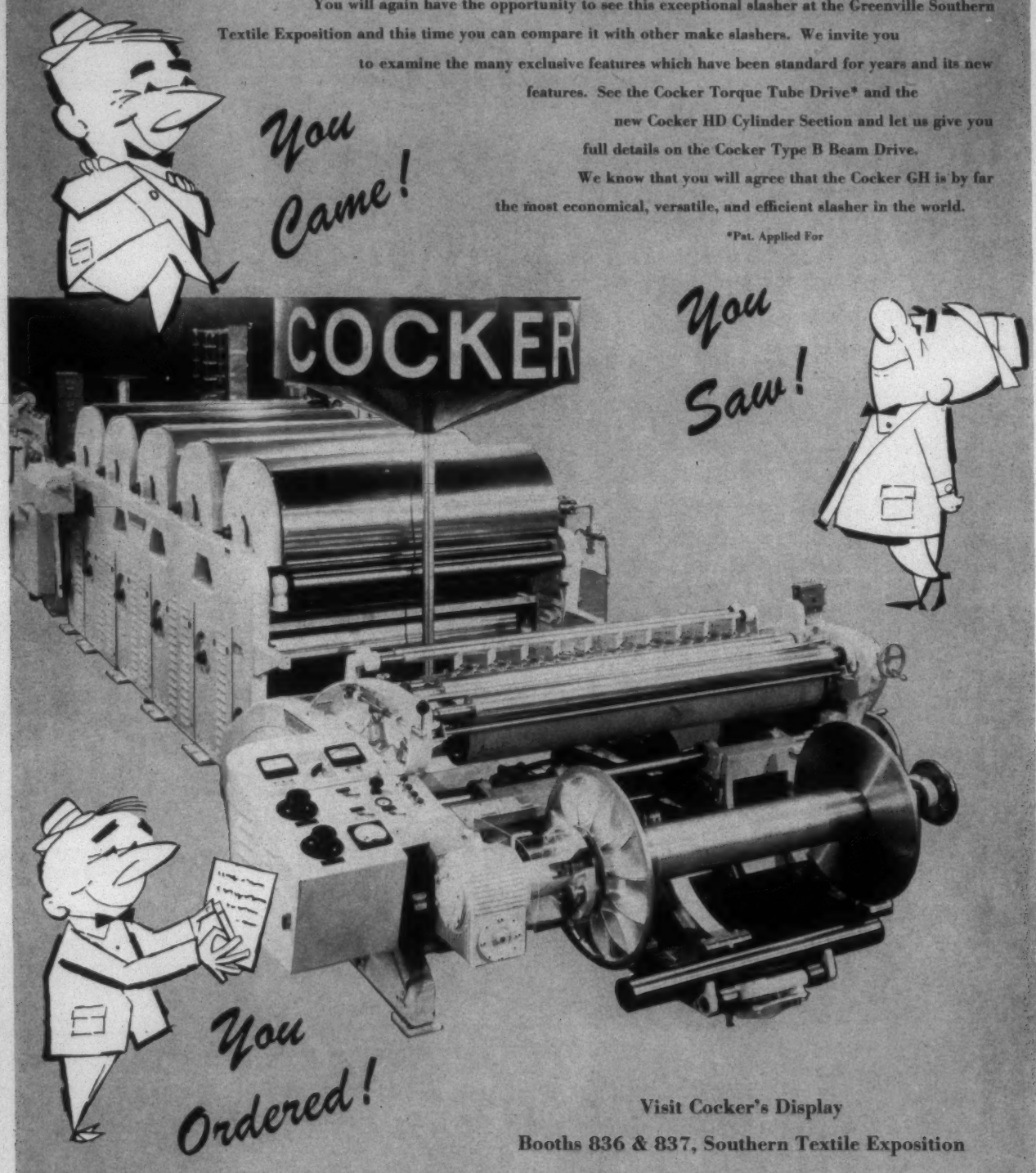
We thank the many textile mill men who crowded into our jam-packed display at the ATMA Exhibition, for their patience and for their enthusiastic comments on the Cocker GH Slasher.

We thank you especially for the orders placed at and since the Exhibition — more orders than have been placed in a similar period in Cocker's many years of leadership in this field.

You will again have the opportunity to see this exceptional slasher at the Greenville Southern Textile Exposition and this time you can compare it with other make slashers. We invite you to examine the many exclusive features which have been standard for years and its new features. See the Cocker Torque Tube Drive* and the new Cocker HD Cylinder Section and let us give you full details on the Cocker Type B Beam Drive.

We know that you will agree that the Cocker GH is by far the most economical, versatile, and efficient slasher in the world.

*Pat. Applied For



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Booths 836 & 837, Southern Textile Exposition

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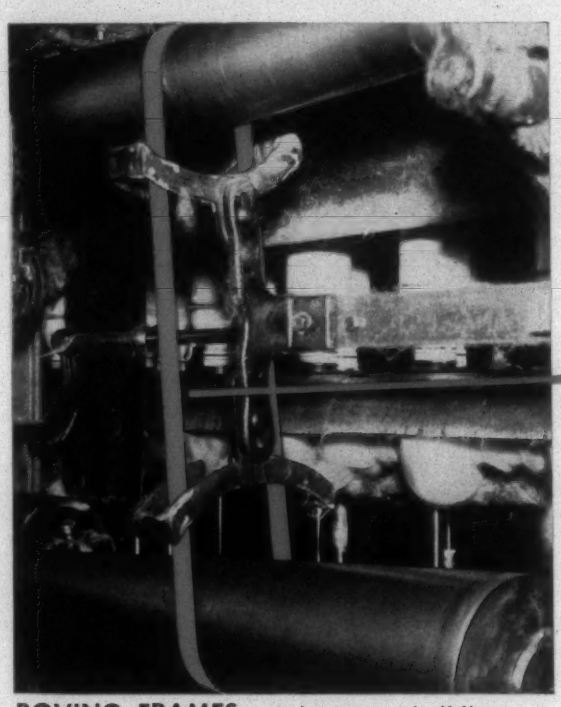
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WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT

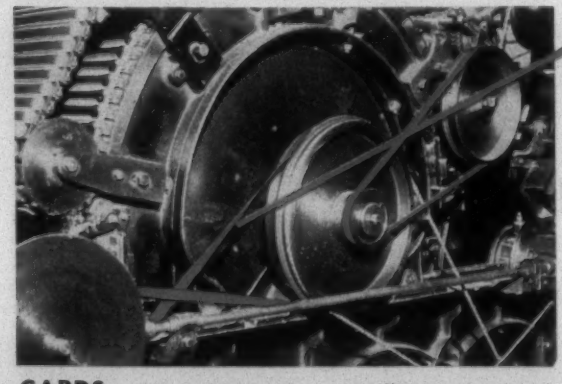
MODERN EXTREMULTUS BELTING



TWISTERS • constant spindle speed • not affected by oil • outlasts all others



ROVING FRAMES • improves building action • cuts ends down in half • eliminates tension gear changes between doffs



CARDS • improves sliver quality • increases production • eliminates belt take-ups

- **IMPROVES QUALITY**
- **INCREASES PRODUCTION**
- **REDUCES MAINTENANCE**
- **CUTS COSTS**

TWISTERS

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SPINNING FRAMES

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COTTON CARDS

See actual drives demonstrated at the Southern Textile Exhibition, Booth 126.

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On the Spot Personal Attention

. . . right in your own mill!



Problems in your Card Room? Ask a TUFFER Sales Engineer to visit your mill and give you assistance in working out a solution. You'll get logical, workable suggestions and recommendations that mean increased production, improved quality, less down time. Your inquiry involves no obligation.

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Manufacturers of Card Clothing since 1866

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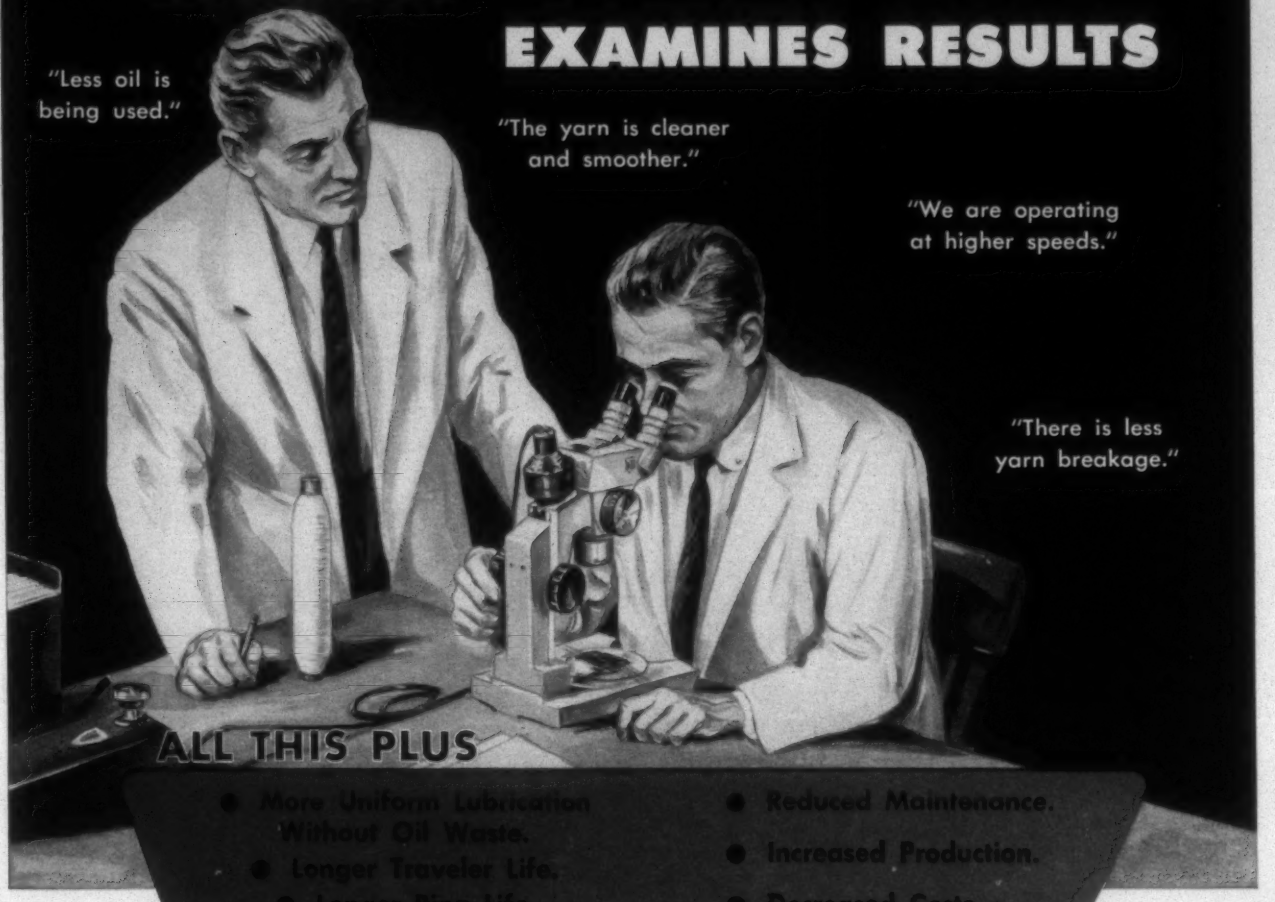
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TUFFER PRODUCTS Card Clothing for Woolen, Worsted, Cotton, Asbestos and Man-made Fibers • Napper Clothing and Brushes • Top Flats re-covered and extra sets loaned at all Plants • Lickerins rewired at Southern Plants • Hand Stripping Cards

A USER OF THE NEW "M" TYPE HERR CONICAL RING EXAMINES RESULTS



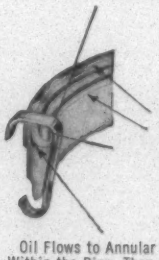
ALL THIS PLUS

- More Uniform Lubrication Without Oil Waste.
- Longer Traveler Life.
- Longer Ring Life.
- Reduced Maintenance.
- Increased Production.
- Decreased Costs.

Now, "M" Type Herr Conical Rings introduce a new method of lubrication called Seam Lubrication. By the principle of capillary attraction oil finds its way from the reservoir through the top and side seams to the wearing surfaces. The minute seams, so fine that they are hardly visible, control the amount of flow so that every drop of oil is utilized. There is no waste—no oil surplus to contaminate the yarn. The operation is clean. There is no rewicking. Maintenance costs are lowered. Oil consumption is greatly reduced, yet faster spindle speeds are possible without extra wear to ring or traveler.

The "M" type Herr Ring has been thoroughly tested for several years in some of the largest textile plants.

Write today. Let us give you all the facts that lead to greater profits for you.



Oil is Supplied to Both Top and Conical Bearing Surfaces Through Seams.

Oil Flows to Annular Reservoir Within the Ring, Then is Drawn by Capillary Action Through Seams.



The 5" diameter 43/64" face Herr "M" Type Ring has only one oil cup. Herr travelers are specially designed to provide best results with this ring.

HERR MANUFACTURING CO., INC.

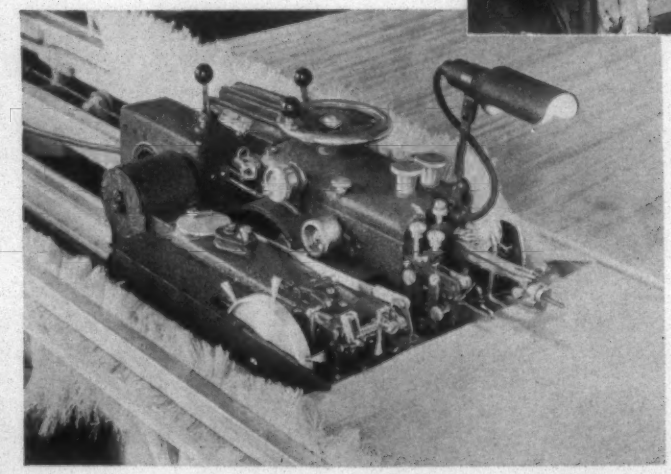
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FOR SPINNING AND TWISTING WORSTED, WOOLEN, RAYON, NYLON, ORLON, FIBERGLASS AND BLENDED YARNS OF ALL TYPES

See us at Booth 267 at the Southern Textile Exposition — Greenville, S. C.

THE TITAN WARP TYING MACHINE





TIES WARPS EASIER— FASTER— MORE ECONOMICALLY!

TITAN Warp Tyers have won world-wide recognition for maximum dependability under all operating conditions. Backed by many years of specialized technical knowledge in warp tying, mill-tested TITAN units are modern in all respects. Fabricated in stainless steel and chromium plated to eliminate all corrosion problems, all 3 TITAN models assure maximum efficiency, ease of operation, and lowest maintenance costs.

TITAN machines work equally well with all types of warps — **permitting easier and faster preparation of warp and pattern.** Tying is performed effortlessly without stumbling or fumbling — knots are passed through smoothly and quickly because tails adjust readily to varied yarn counts.

You can depend on TITAN for superior performance on all counts, including prompt spare parts and unexcelled engineering service. PRODUCTION-WISE or SERVICE-WISE you can't beat TITAN — ask the mill which has one.

You can see the latest model TITANS in actual operation at the SOUTHERN TEXTILE EXPOSITION, Greenville, S. C., October 3-7, Booth No. 129.

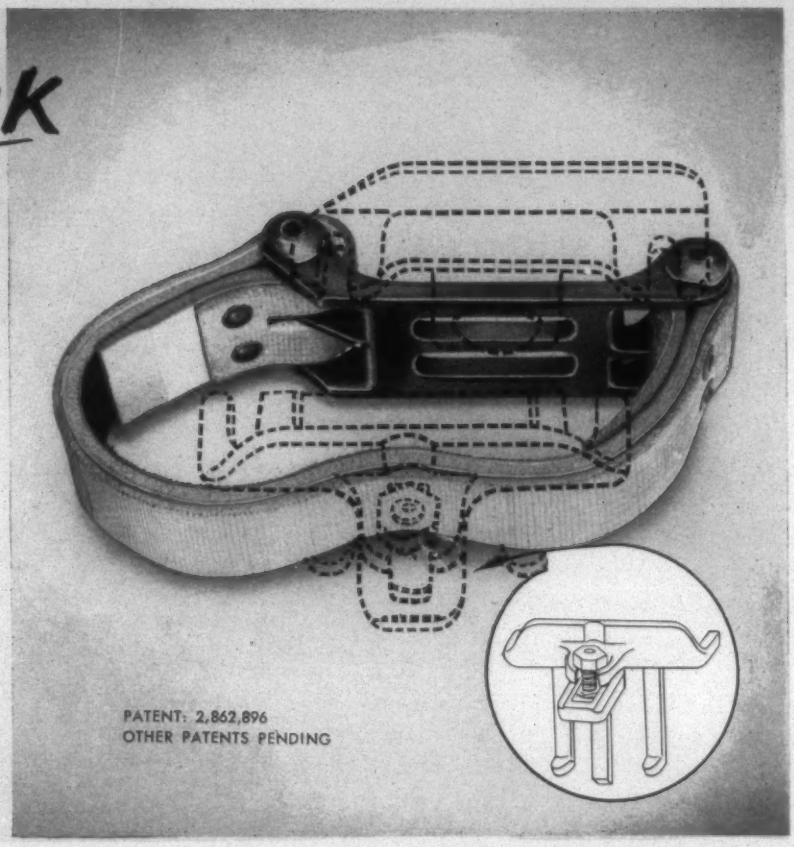
EDDA INTERNATIONAL CORP.

468 FOURTH AVE., NEW YORK 16, N. Y. CALHOUN TOWERS, GREENVILLE, S. C.

Run your looms faster... longer... with better boxing and less power...

Nucheck

PRODUCT OF SLIP-NOT BELTING CORP.



You Check Nucheck:

- Greater efficiency . . . looms can be operated at high speed with less power
- Perfect boxing
- Low initial cost
- Lower replacement cost because of Nucheck's longer life: there are no holes to wear out
- Simple design, no extra parts
- Easily attached to the loom with a single wrench
- Free-pivoting action eliminates "Monday morning" start-up problems and breakage

TEST-PROVED to be the best checking device for high-speed looms

Check the many Nucheck advantages and you'll see why weaverooms who have tested Nucheck agree that it is the best checking device on the market today. Models available for X, X-2, XD, XL, S-5, S-6 and many other looms. Equipped with our finest Hair Leather in all-leather strap or leather-and-fabric combination strap.

Get top speed . . . smoother boxing . . . longer life . . . the Nucheck Way . . . test-proved the best checking device on the market.

Weaveroom tests prove Nucheck assures greater efficiency . . . greater economy for today's high-speed looms



SLIP-NOT BELTING CORP.

Manufacturers and Distributors of Power Transmission Equipment

KINGSPORT, TENNESSEE

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MADE IN U.S.A.
TRADE MARK
THE BELT WITH THE CATERPILLAR GRIP
SLIP-NOT BELTING CORP.
KINGSPORT, TENN.

New fully transistorized LINDLY Series 1000 *Ultra* Yarn Inspector





Typical Ultra Yarn Inspector Installation: detecting head mounted on floor stands, transistorized control unit attached to leg.

. . . automated "first" on view at Greenville Exposition, 1960

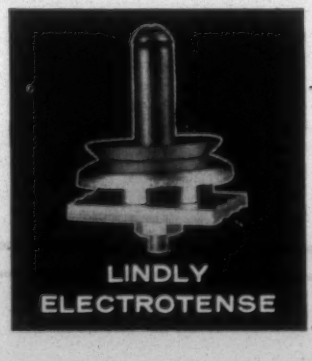
New Lindly features for multi-filament textile and tire cord yarn quality control and reduction of warping costs keep pace with rapid advances in applied electronics. Our transistorized units have undergone long and careful testing under actual mill conditions as well as in our laboratory. Now we introduce, for the benefit of both synthetic yarn producers and the processors of yarn, the new transistorized Lindly Series 1000 Ultra Yarn Inspector — the first of its kind.

Controls: Fully transistorized circuitry achieves maximum stability and automatic sensitivity control — longer component life, less maintenance, simplicity in servicing, greater compactness, less power consumption. Choice of single level, dual level, and dual level with length selector.

Detecting Head: New optical system makes possible better electronic performance, eliminates need for light deflector cover, improves uniformity of sensitivity across width of the yarn sheet — has special new lamp with simpler alignment adjustments, completely cylindrical and longer yarn gauging surfaces, smooth finish resistant to accumulation of lint and dust.

See LINDLY Electronic Products Booth 827

Southern Textile Exposition
Greenville, S. C.
October 3rd through 7th



Ask about options and variations that can adapt Lindly Series 1000 Ultra Yarn Inspection technique to your operation. Mail the coupon today—or send us your specific problem.

FOSTER MACHINE COMPANY
Electronic Sales Division
Westfield, Mass.

Please send me information on Lindly Series 1000 Ultra Yarn Inspector.

Name _____ Title _____
Company _____
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City _____ State _____

FOSTER MACHINE COMPANY
Electronic Sales Division
Westfield, Massachusetts, U.S.A.
Southern Office:
Johnston Bldg., Charlotte, N. C.

297-0


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Polyester Fiber
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(CANADA) LTD.
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Next time
something
POPS
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National
textile technical service man
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ATLANTA; 53 Fargo St., BOSTON; and other principal cities.
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Watson & Desmond

MAIER-FLÜGEL



With The New Maier F-Type Flyer You Get 30 - 40% Weight Increase With The Same Package Size!

The new Maier F-Type Flyer compresses the roving and winds it without friction on the bobbin. This is how you obtain from 30% to 40% weight increase with the same package size . . . and equal or better roving quality!

With the Maier F-Type Flyer, you get maximum efficiency in the processing of any type of cotton, wool or synthetic fiber, because you get longer operation of the flyer per doff . . . less ends down on roving frames and spinning frames . . . less creeling on spinning frames. And the roller needs absolutely no maintenance.

Unequalled dynamic balancing gives the F-Type Flyer a maximum displacement of center of gravity of only 0.10 mm. All flyers have the latest chrome-plated finish.

F-Type Flyers are made to fit all makes of roving frames and are adaptable to any spindle spacing.

Call your Watson & Desmond representative today. He will measure your frame, recommend the widest possible flyer and give you an estimate of the increased weight of roving you can obtain with the new Maier F-Type Flyer.

See Us At Booth 128

SOUTHERN TEXTILE EXPOSITION



OR CALL THE FOLLOWING WATSON & DESMOND REPRESENTATIVES:

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Edgar E. Ball
Marshall Gayle
EDison 3-6154

IN GASTONIA:
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Box 1174
UNiversity 5-8631

IN WEST POINT, GA.:
H. Dorsey Lanier
Box 421
Phone 64-23363

IN GREENVILLE, S. C.:
Ray A. Norman
Box 779
CEdar 9-4279

IN GREENSBORO:
John Wyatt
Ralph Patton
Box 701
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More Than 40,000,000 Zinser SKF Spindles Now Serve The World's Textile Industry



THE ZINSER WARP SPINNING SPINDLE

There's a good reason why more and more mills are using Zinser Spindles with SKF inserts . . . they are performance-proven.

Because of the higher speeds and larger packages possible with Zinser Spindles, mills have increased production as much as 20%. Zinser Spindles are smooth running at highest speeds, easier to maintain and simpler to lubricate.

Sized for bobbin weights from 1 3/4 ounces up to 12 pounds . . . for speeds up to 18,000 R.P.M.

Whatever your spindle needs, investigate Zinser, manufacturers of filling spindles, warp spinning spindles, large paper package woolen spindles, high-speed twister and draw twister spindles-all with SKF inserts. Call Watson & Desmond today.



Nitrided Spinning & Twister Rings . .

THERE IS NO RING AS GOOD AS A NITRIDED RING

Spinning Rings: Reversible and non-reversible, 8 and 10 mm. cured and straight web . . . Twister Rings: Reversible and plain. Nitrided rings insure surface hardness of 67 to 69 degrees C. Rockwell . . . practically corrosion-free. Accurate profile, mirrorlike finish for longer life, fewer ends down, increased spinning and twisting production, improved yarn quality . . . Specify R & F Nitrided Rings. Chrome manganese twister rings also available for heavy traveler applications.

Call Watson & Desmond For...

- Shuttles ..... Watson-Williams Mfg. Co.
- Anti-Friction Top Rolls & Ny-Pre-Lon Cradles for Spinning and Roving ..... Progressive Engineering Co
- Paper Spinning Tubes & Quills ..... Textube Corporation
- SKF Roller Bearing Spindles ..... Zinser
- Maier Prima Flyers ..... Eugen Maier
- Spinning & Twister Rings ..... Reiners & Fuerst
- Wood Spools, Bobbins & Cones ..... Vermont Spool & Bobbin Co.
- Fibre Head Spools & Bobbins ..... H & P Spool Bobbin Co.
- Plastic Yarn Carriers & Spindle Adapters .... Modern Plastics Engineering Corp.
- Shuttle Fur ..... R. M. Taylor Co.
- Humidifiers ..... Walton Laboratories, Inc.
- Dye Tubes & Headless Shipping Packages ..... New England Paper Tube Co.
- Dubo Spindle Lock Washers ..... G. Dikkers
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The Number Is...EDison 3-6154

TEXTILE SUPPLIES W D USED MACHINERY

Watson & Desmond INCORPORATED

P. O. BOX 1954 • CHARLOTTE, NORTH CAROLINA

Lovely Lady —IN SOPHISTICATED FURS

She's suave, smooth and confident in a stylish fur fabric Orlon coat thanks to Curtis & Marble's High Pile Napper.

High style and quality fabrics are natural companions . . . and fine fabrics get the final touch of quality in cloth rooms equipped with modern, efficient Curtis & Marble finishing room equipment.



HIGH PILE NAPPER
For looped knitted goods used for linings and simulated fur fabrics



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CM-125 SHEAR

CURTIS & MARBLE
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HEADQUARTERS FOR FINE CLOTH FINISHING MACHINERY SINCE 1831

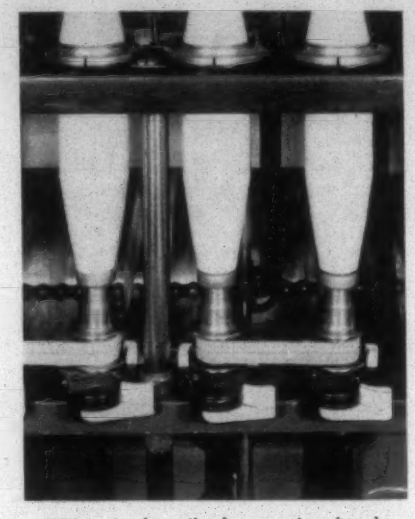
See our new machines at
BOOTH 235
SOUTHERN TEXTILE EXPOSITION
Greenville, S. C., October 3-7

Southern Sales & Service:
LAURENS ROAD • GREENVILLE, SOUTH CAROLINA

For The Textile Industry's Use

– NEW MACHINERY, EQUIPMENT AND SUPPLIES –

Spindle Handbrake



What is described as a simple, durable and easily operated spindle handbrake has been developed by the Whitin Machine Works, Whitinsville, Mass., for the Centerbase No. 880 spindle. This new handbrake was especially designed to provide a quick, positive brake which would simplify the piecing up operation.

Simple to install and easy to operate, this new clamp-on handbrake reduces the hazard of bobbin burn and avoids jammed tubes, Whitin reports. It applies pressure evenly on both sides of the whorl without vibration, instead of against one side of the spindle like a knee brake. New brake pads can be easily replaced at the mill without gluing or riveting, according to Whitin.

The new clamp-on handbrake can be applied to Centerbase No. 880 spindles already in the field, having standard thin edge whorl flanges as well as Whitin's newest spindles with skirt-type lower flanges, which provide a larger braking surface.

Designed for long life, the clamp-on handbrake has two high-strength molded resilient plastic braking arms with pockets to accommodate brake-pad inserts. These self-locking pads can be inserted or removed easily, Whitin reports.

The brake handle and activating cam are also of high-strength molded plastic, well able to stand normal usage—and some abusive treatment—without breaking or reducing functional value.

(Request Item No. I-1)

Nickel Plated Heddles

Nickel plated twin steel wire heddles are now available for short delivery in this country through Ernest L. Frankl Associates, New York City. The nickel plating adds protection against corrosion and lint accumulation.

The long end loops absorb the shock of the harness movement, alleviating the strain on the warp and thereby reducing the number of warp-breaks. Due to the lower weight of the wire heddles the strain on the loom is also lessened. The jointless inserted eye is said to minimize friction on individual warp ends.

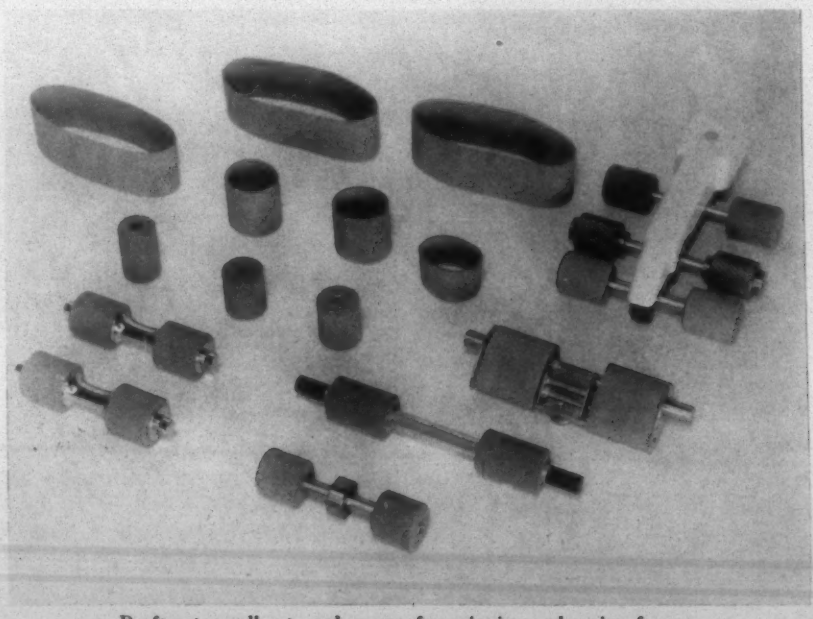
(Request Item No. I-2)

Top Roll Cots, Aprons

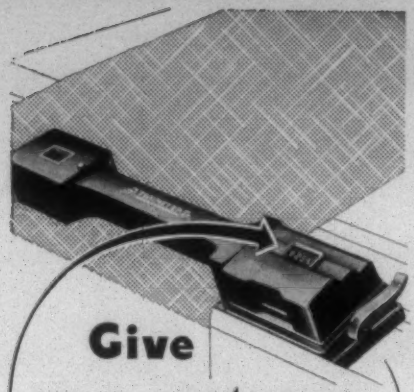
Dixon Corp., Bristol, R. I. and Charlotte, N. C., introduced at the recent Atlantic City Textile Show a new line of top roll cots and aprons for spinning and roving frames under the tradename Draftex.

Draftex covering materials are manufactured for all kinds of top rolls and every make of drafting system, both old and new. Cots are made from Buna N synthetic material in sizes up to 2¾" O.D. and for any length of working face. Draftex back roll cots have a filler additive to increase drive. All Draftex cots are anti-static and the compounds incorporate complex agents: (1) to maintain a clean drafting surface by preventing the development of an oily surface film; (2) to prevent ends-down due to lapping; and (3) to resist the generation of static electricity which can cause electrification of the sliver or yarn with its associated disadvantages. Varying hardnesses are available from the newer very soft materials to the more conventional harder compounds. Draftex aprons are available to suit most sizes of single and double apron drafting systems. The apron is produced as a single homogeneous layer of synthetic rubber, reinforced by high strength synthetic fiber cords centrally disposed within the wall thickness, thus preventing stretching in service, yet providing resilience. These aprons have a smooth satin-like finish designed to give improved fiber control.

Dixon says that the use of Draftex cots and aprons result in cleaner run-



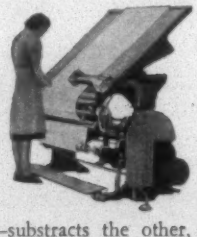
Draftex top roll cots and aprons for spinning and roving frames.



Give your customers what they pay for

Kill short measure for good! Convince your customers with *accurate* clearly-printed records—it's so easy with "TRUMETER." At any point on a run, the touch of a lever will deliver a ticket or mill tag carrying an exact record of production. It's a sure way to cut complaints—and slash waste, too. That's why you can't afford to be without "TRUMETER"—for PROFIT's sake!

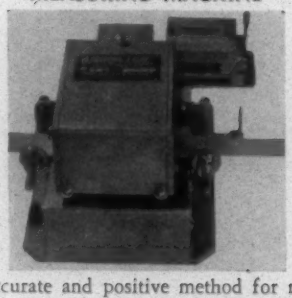
"TRUMETER"



can be fixed to most Inspection, Plaiting, Winding, Rolling and Doubling machines. Models are available for all types and widths of material—fine nylon, woollens, worsteds—even carpets, plastics, etc. It adds one way—substracts the other, and delivers its printed ticket with one depression of a lever. "TRUMETER" is always accurate—always reliable. There's one for *your* need. Write now for particulars of complete line.

TRUMETER

RIBBON AND TAPE MEASURING MACHINE



An accurate and positive method for narrow fabric measuring. Equipped with automatic brake and adjustable nip roller to prevent slippage and overspin. Adjustable guides for different width of materials. Equipped with quick reset counter.

Write for details to:

TRUMETER COMPANY

Sales and Service
38 West 32nd St.
New York 1, N. Y.

See Us In Greenville At Booth 245

FOR THE TEXTILE INDUSTRY'S USE—

ning, less waste, reduced lapping, and improved ends-down performance.

(Request Item No. I-3)

Printing Extender For Glass Fabrics

New Gloprint Conc. WK-1 and WK-4, developed by Eastern Color & Chemical Co., Providence, R. I., is said to be the only all aqueous printing extender-binder on the market, developed expressly for printing on glass fabric.

Approved by Owens-Corning Fiberglas Corp., the newest member of Eastern Color's Gloprint group has passed wash tests, fastness to light tests, and other standard requirements "with gratifying success." A concentrated, high-molecular weight, resin polymer, it is a smooth heavy, white paste which is readily soluble in water to afford an aqueous extender-binder paste which is termed ideal for both screen and roller printing.

Softness is described as excellent, and it is said that the fullest color value is obtained together with superior crock resistance. Like other members of the Gloprint Conc. group originated by Eastern, the new extender-binder for glass lends itself to use with the oil-in-water system as well as all aqueous systems.

Printing pastes may be prepared with or without solvents, as conditions dictate. When solvents are used, up to 20% may be incorporated and a full-bodied oil-in-water printing paste is still obtained.

(Request Item No. I-4)

Doffer's Helper

A. Benson (Ben) Davis & Associates, Charlotte, N. C., have developed a handcrank braking device for Saco-Lowell and Whitin spinning frames that is designed to replace foot pedal braking. To be marketed as a Doffer's Helper, the device is being especially recommended for long traverse bobbins although it can be used on any size bobbin.

Two advantages are being cited for the device. First, and especially with long traverse bobbins, the handcrank brake eliminates personal injuries to doffers. It does away with the possibility of back strains or foot/ankle injuries occasioned through the use of



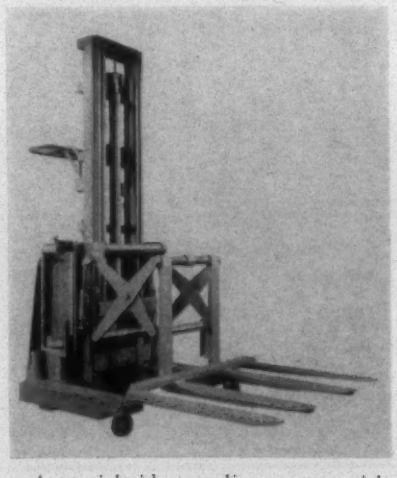
This hand braking device for spinning frames is especially recommended for long traverse bobbins to eliminate strains and injuries risked in the use of foot pedal braking.

the foot pedal. It also does away with broken foot pedals.

Two bolts clamp the gearing attachment onto the frame. Mounting is no problem and can be accomplished in short order. The brake chain is attached to the old pedal linkage. Only three turns of a handcrank are required to lower the rail on a 9" traverse. Machined rather than cast gearing is used in the device. A safety device prevents the rail from jumping back up. The device will be shown at the Southern Textile Exposition mounted on a rebuilt spinning frame in the display of The Bouligny Co., Booth 474.

(Request Item No. I-5)

Narrow Aisle Truck



A special side traveling narrow aisle reach-style truck equipped with special slip-on forks designed to handle extra long, unwieldly loads in narrow aisles is being offered by Lewis-Shepard Products Inc., Watertown, Mass.

The special fork attachment slips



LET'S GET TOGETHER!

Southeastern Loom and Machine Works is in production position to accept additional orders on:

- Card Coiler • Card Drive
- Card Doffer Gear with Taper-lock Bushing
- 15" x 42" Coiler Changeover for Drawing Frame
- Spinning Frame Spindle Pulley Drives for replacing cylinders
- Teflon Coated Cast Aluminum Sliver Guide

LOOMS designed for light, medium or heavy fabrics

LOOM parts for all existing looms

- No. 11 Motor Drive
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- Even if you are satisfied with your present source, it's important to have a dependable second source, particularly for replacement parts.
- Southeastern parts are time-tested, use-tested, precision-engineered.
- Southeastern replacement parts are unparalleled . . . particularly outstanding are the Loom Parts, Card Drive, Card Coiler, #11 Motor Drive, Spreader and Spinning Frame Pulley Drive.
- Especially, Southeastern will make modifications on looms and loom parts to your specifications. In other words, Southeastern's service is completely individualized.

See Southeastern for individualized loom service—of course, your complete satisfaction is guaranteed.

WATSON-WILLIAMS



WEAVE-ever Shuttle

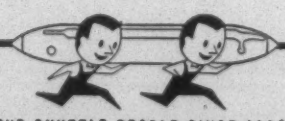
Made full thickness of resin impregnated and laminated fabric, for long life and extra rugged service.

Bring your shuttle knowledge up-to-date at Booth 128 Southern Textile Exposition, Greenville, South Carolina, the week of October 3rd. Watson-Williams whole family of shuttles will be on hand.

See the full display of Watson-Williams Picker Sticks



Our completely new facilities, in this building specially designed for the manufacture of shuttles, are now in full operation at Pinebluff, N. C. on U. S. Route 1.



THE SHUTTLE PEOPLE SINCE 1830

WATSON-WILLIAMS MFG. CO.

PINEBLUFF, N. C.

Representatives: Howard S. Pellatt, P. O. Box 73, Lincoln, Rhode Island; Sutton M. Ebert, Box 7143, Elkins Park, Philadelphia, Pa.; Watson & Desmond, Inc., Box 1954, Charlotte, N. C.; John Wyatt and Ralph Patton, Box 701, Greensboro, N. C.; Ray A. Norman, Box Drawer 779, Greenville, S. C.

FOR THE TEXTILE INDUSTRY'S USE—

over standard forks and locks to the carriage to provide the wider fork spread necessary. By removing the fork attachment the reach-style MN Aisle-Master can also be used as a standard narrow aisle truck or as a side traveling unit when desired.

(Request Item No. I-6)

Brine Headers

High corrosion resistance and multiple cost saving features are said to be combined in Duracor Chlorine saturated brine headers available in standard sizes from the Ceilcote Co., Cleveland, Ohio. The cost of buying and installing the headers is said to be 65% lower than ceramic pipe and 75% lower than asbestos filled phenolics. Installation costs are reduced by one-piece construction which minimizes joining problems, facilitates sealing and eliminates leaks.

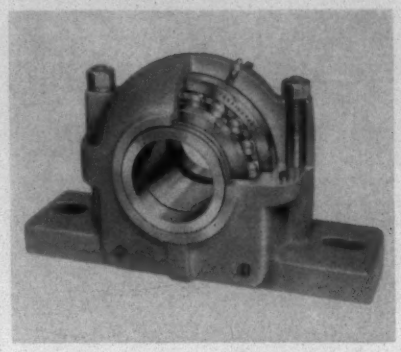
The brine headers are said to be especially adapted to the textile industry, where the chlorine content of solutions is extremely heavy. They are available in standard 8 and 16′ lengths and in 6, 8, 10 and 12″ diameters. Duracor is also said to offer extreme resistance to shock and impact.

Produced from Duracor Series 6000-4 resins, the brine headers are mandrel built with wall thicknesses maintained at $\frac{3}{16}$″. Each unit is tested at 90 p.s.i. and will operate at temperatures up to 180° F.

Duracor is a reinforced plastic that offers a combination of chemical, heat, flame and abrasion resistance. Important physical properties of the plastic include tensile strength ranging from 11,000 to 15,000 p.s.i. and flexural strength from 20,000 to 30,000 p.s.i.

(Request Item No. I-7)

Pillow Blocks

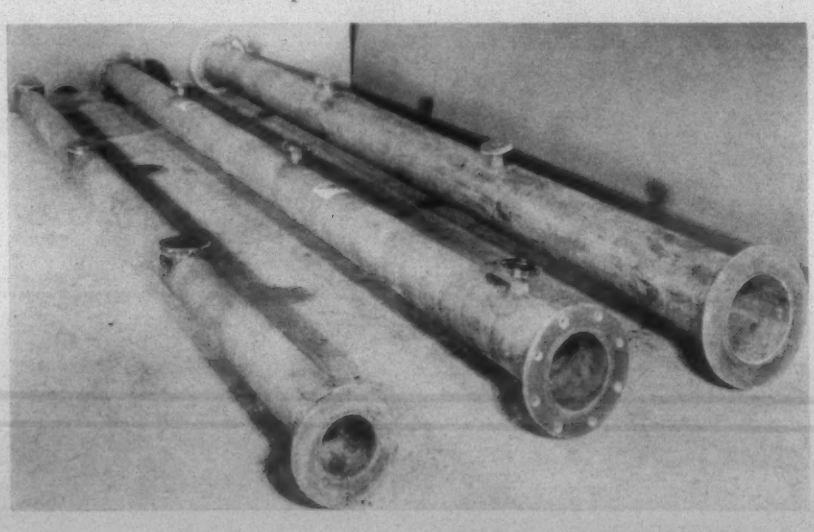


New heavy duty pillow blocks, with self-aligning spherical roller bearings in split housings, are now available in 143 sizes from The Torrington Co., South Bend, Ind.

Two heavy duty series are offered—Series SAF, with two bolts clamping cap to base, and Series SDAF, with heavier castings and four cap bolts. All sizes are available with straight bore bearings for shouldered shaft mounting or with adapter bearings suitable for mounting on straight commercial shafting.

Housing seats are machined to bearing widths plus $\frac{3}{8}$″. This permits each pillow block to be used as a floating unit or, with standard $\frac{3}{8}$″ wide stabilizing ring in place, as a fixed pillow block.

The Torrington spherical roller bearings used in the new pillow blocks are said to have high radial and thrust load capacities combined with low torque. The internal self-aligning feature of the bearing permits a reason-



able latitude in alignment of pillow blocks during installation and operation. An integral guide flange, adding strength to the bearing inner ring, guides the rollers and prevents roller skew. Precision machined bronze retainers for each row of rollers are land riding to reduce friction, provide quiet operation and cool running. The open end retainer pockets allow lubricant to reach all contact surfaces, Torrington reports.

The split housings are manufactured from high grade, stress-relieved cast iron. Cast alloy steel caps and bases are available also. Housing design accommodates either grease or oil bath lubrication and is said to be easily adapted to circulating or oil-air mist systems. Triple labyrinth seals are designed to retain either oil or grease and prevent entrance of dirt. The close running clearance of the seals, without rubbing contact, allows them to operate under conditions of normal misalignment.

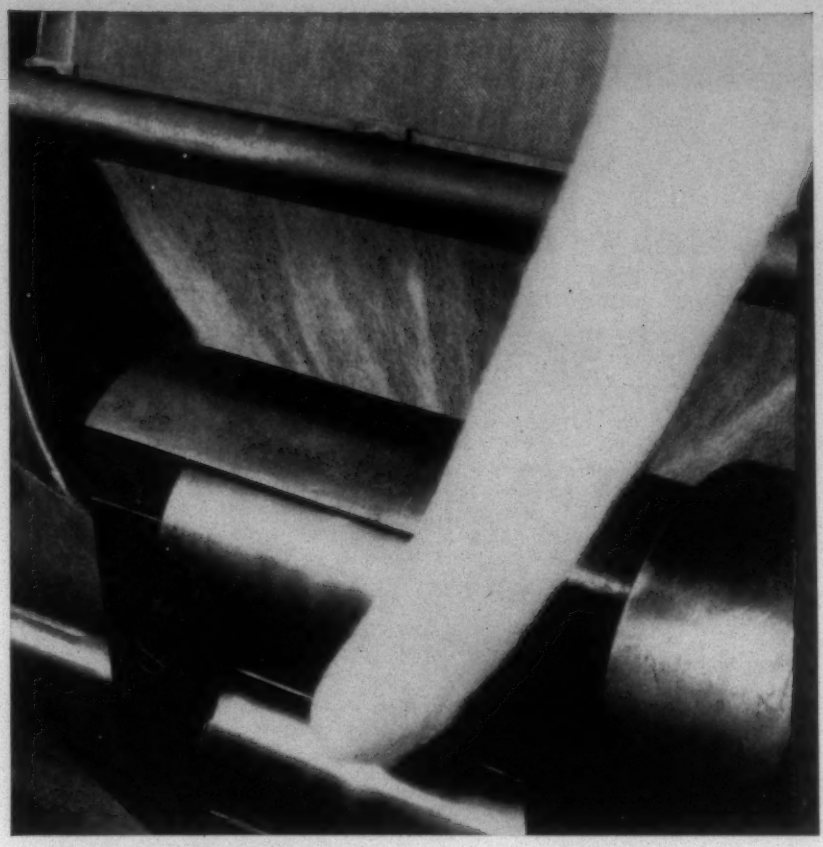
(Request Item No. I-8)

Lint Tight Loom Switch



Allis-Chalmers Mfg. Co., Milwaukee, Wisc., has announced the introduction of a new lint tight manual motor control designed to start and provide overload protection for a.c. and d.c. motors maximum rated at 5 h.p., single phase, 440-550 volts a.c., and 7½ h.p., polyphase, 440-550 volts a.c., and 2 h.p., 230 volts d.c.

Compact enclosures are sealed



Booth METALLIC

Super Precision Metallic Wire

Years of investigation, research and mill study have resulted in the selection and development of Booth Metallic.

Booth studied all metallic wire available the world over, including types produced in Russia. In leading foreign mills with outstanding production records—Graf metallic wire from Switzerland was always the first choice.

Modifying this wire to the needs of American mills, Booth now offers a wire that is milled rather than punched, providing absolute uniformity of tooth shape and height with complete freedom from burrs. Even temper of Booth Metallic eliminates broken teeth and the super hard points prevent premature dulling. This superior wire costs no more than other makes.

A Booth representative can help you achieve the best in carding performance.

See us at Exhibit No. 464 at the Southern Textile Exposition

QUALITY CARD CLOTHING SINCE 1892

BENJAMIN BOOTH COMPANY

ALLEGHENY & JANNEY STS., PHILA. 34, PA.

Booth

Sales Offices: Charlotte, N.C.—Richard Hurley • Philadelphia, Pa.—Norman F. Bush—REgent 9-8989
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FOR THE TEXTILE INDUSTRY'S USE—

against entry of lint contaminants by closed cell rubber gasketing. Mounting may be either wall or pedestal. The latter includes conduit entry. Thermal overload protection, which includes trip-free operation, is provided. If the overload relays act to open starter contacts, they cannot be closed until the relays have been reset.

A unique operating principle is said to offer high reliability and to lengthen service life. Operation of a rotary-type handle releases spring loaded movable contacts, allowing them to close and bridge the stationary contacts. Constant contact pressure is assured by the springs.

Upon operation of the melting alloy overload relay, also spring loaded, an operating rod attached to the overload relay forces the movable contacts open. This rod is extended to an extreme open position and held there by a ratchet mechanism. With the rod extended it is impossible to reclose the starter contacts without first resetting the overload relay. This means that once an overload condition exists, the starter contacts are no longer in control of the handle.

If the relays are reset and the starter is again closed while the motor is still overloaded, the relays will continue to trip until the overload is removed.

(Request Item No. I-9)

Fire Retardant

Burkart-Schier Chemical Co., Chattanooga, Tenn., has developed what it describes as a low-cost inorganic fire retardant of the renewable type, recommended for treating all natural and most synthetic fibers. The substance is said to impart exceptionally good resistance to fire and flame, with complete control of after-glow.

A unique feature claimed for the new development is its resistance to high temperature drying conditions. Many fire retardants tend to discolor and/or tender textile fabrics under high heat or extended heat exposure in drying or curing, the company reports, but Fire Retardant RC has a definite protective action minimizing this effect. This overcomes a major defect of the usual soluble salt type inorganic renewable fire retardants.

For extreme conditions the company recommends Fire Retardant RCX, which protects fabrics under extreme drying conditions while imparting the same high level of resistance to flame as well as control of after-glow.

Fire Retardant RC is 100% active and there is an appreciable weight gain for goods processed with it, depending upon amount applied. Application is simple—the product dissolves readily and is applied by padding—and normally presents no application problems.

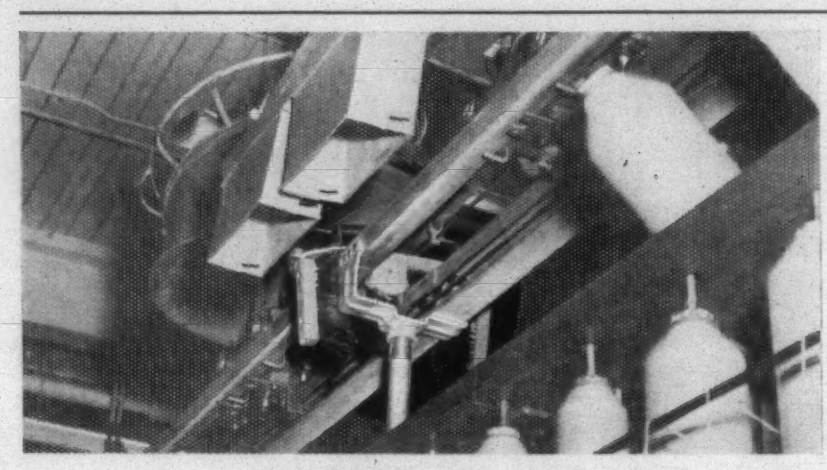
Although not washfast, it is said to fill the need for an inexpensive readily applied highly effective renewable type fire retardant.

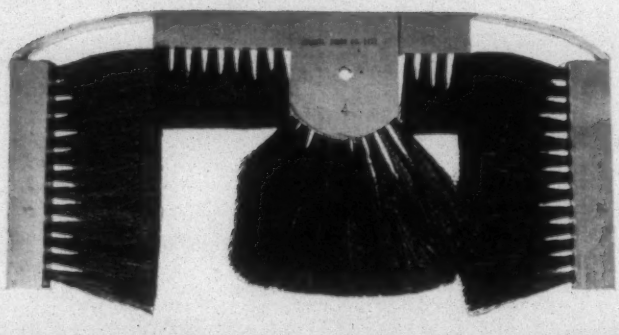
(Request Item No. I-10)

Avistrap Tensioner

A mechanized tool for use with the newly developed Avistrap rayon cord strapping has been announced by the Industrial Packaging Department of American Viscose Corp., Philadelphia, Pa.

Known as the Avistrap Mechanized Pneumatic Tensioner, the new tool will handle all widths of cord strapping from ¼ to ¾". According to American Viscose, the new tensioner will enable shippers to speed opera-





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On hydrophobic fibers, Penford Gums adhere firmly and impart elasticity to sizings on these difficult-to-size yarns.

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tions; decrease operator fatigue; permit pre-determined tension; and help improve shipping efficiency.

(Request Item No. I-11)

Tension Meter

The new Saxl tension meter featuring a mechanical three-roller shunt and low inertia pulleys rotating on precise ball bearings has been introduced by Tensitron Inc., Harvard, Mass. The meter is quickly clipped in yarns moving at high speeds. Due to the shunt, the yarn is hardly shortened. The meter thus gives correct readings even if free distances of traveling filaments are short.

Readings are said to be independent of the way the operator holds the tension meter. Tension on the moving yarn is read in clear figures on the dial facing the observer.

Its dual range, two-color dial makes one meter the equivalent of two instruments with a scale over 12½" long, Tensitron reports. The new meter is said to have greatly extended resolution on the lower end of the scale where the most critical tensions lie. In addition, it extends the dial range over 100% beyond the first revolution of the pointer.

The instrument's damping has been increased for applications where it is advisable to "average out" excessive oscillations of tension.

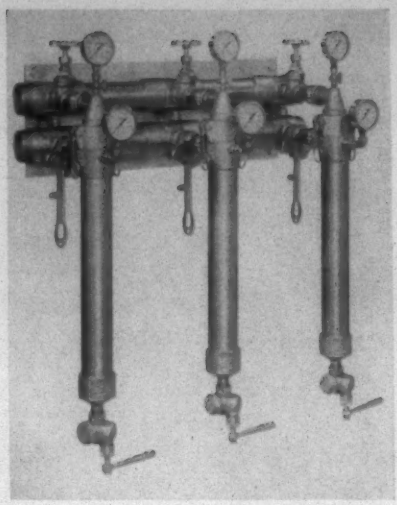
(Request Item No. I-12)

Fluid Filters

Ronningen-Petter Co., Vicksburg, Mich., has developed a line of wall mounted fluid filters which are described as small, quick coupling, lightweight and compact. The units are designed for water, oils or chemicals either hot or cold.

They are used to prevent nozzle plugging; to eliminate iron and pipe scale; for clarification of viscose liquids; for protecting hydraulic valves and flow meters; and for other critical filtering applications. The elements of the unit will withstand 150 p.s.i. differential pressures without collapse.

The filters may be backwashed and



blown-down "on the run." The units are rated at 5 to 350 g.p.m.; 10 to 700 mesh; pressures to 200 p.s.i.; temperatures to 450° F. They are available in bronze, steel, 316 stainless steel throughout, monel throughout and aluminum. They are produced 2, 3 or 4 in parallel, i.e., duplex, triplex and fourplex.

(Request Item No. I-13)

Blue Disperse Dye

Artisil Direct Blue BSR New, an improved blue dye in the disperse class for use on acetates and other synthetic fibers, has been developed by Sandoz Inc., New York City.

Fastness properties are said to be identical with a previous product, Artisil Direct Blue BSR, but the new dye is said to show improved dispersing properties as well as significantly less tarring.

(Request Item No. I-14)

Portable Mixers

A completely new line of Lightnin propeller-type portable mixers for fluid agitation in process industries has been introduced by Mixing Equipment Co., Rochester, N. Y. Designed as an integral unit, the new mixer is said to offer increased mixing efficiency, improved handling convenience, and maintenance-free operation. It will be marketed in sizes ranging from ⅛ h.p. to 3 h.p., and will also be available in a fixed mounting design in all except ⅛ h.p. sizes.

The new Lightnin mixers offer not only direct-drive speeds of 1,750 r.p.m. and 1,150 r.p.m. with higher impeller heads, but also a gear-drive model speed of 350 r.p.m. providing

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PIONEER TEFLON APPLICATORS IN THE SOUTH ATLANTIC STATES
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up to 45% more flow than previous units. Gear drive models are quiet running, leak-proof, and equipped with single reduction, internal helical gears for compact drive, additional strength, and improved gear life. Both direct and gear-drive models rotate clockwise.

Said to be a unique feature of the new Lightnin series is its positive drive chuck, permitting fast, accurate coupling in one simple operation. Its location is always above the maximum fluid level of the mixing tank. A flat on the mixer shaft insures a positive grip and correct position with each shaft insertion.

Specially-designed chemical plant motors, standard at no extra cost with both portable and fixed-mounting mixers, are ball bearing and totally enclosed or explosion proof.

In the portable line, optimum mixing efficiency is said to be assured by means of a unique position-indexing device on the housing ball and clamp socket. The mixer can be adjusted 90° in the vertical plane and 360° in the horizontal plane. The index pinpoints the mixer's optimum position and facilitates re-positioning in a simple, quick operation.

A damping pad between the housing ball and clamp socket minimizes vibration and permits use of longer shaft lengths as needed. All adjustments of the clamp, wedge-assembly, and chuck are effected by a single Allen-type hex wrench.

Fixed mounting mixers are built for both open and closed tank installations. The closed tank series mount on standard IPS mounting flanges and can be furnished with either a newly designed stuffing box or rotary mechanical seal.

(Request Item No. I-15)

Spinning Frame Filling Builder

A new automatic spinning frame filling builder has been designed to eliminate the costly necessity of rewinding filling for use in the Draper automatic filling magazine.

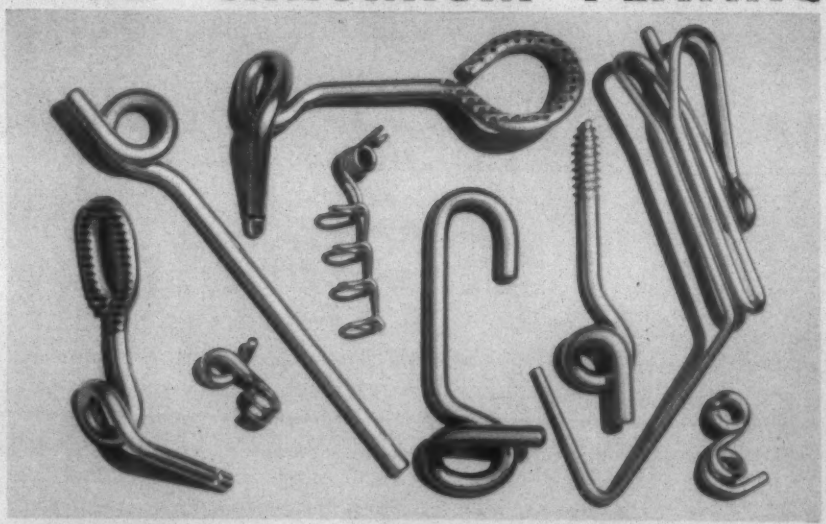
All manufacturing and selling rights for the new Winslow automatic filling builder have been purchased from Winslow Inc., by Southern Machinery Co. of Greenville, S. C.

The Winslow is said to be a completely automatic spinning frame filling

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builder that will wind any type of quill for any make of automatic loom. It is a compact unit adaptable to all spinning frames.

The new filling builder puts a "bunch" on the filling bobbin so the Draper will pick it up.

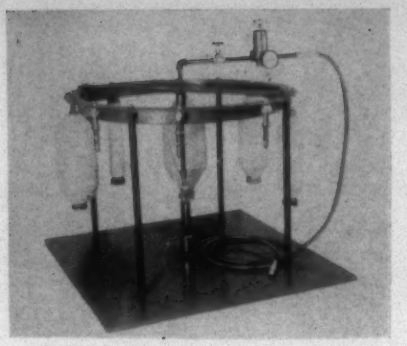
The performance of the machine so far indicates that it will hold many advantages even when the Draper magazine is not being used. The unit can wind a denser quill that will have from 15 to 20% more yarn, according to Southern.

(Request Item No. I-16

Bobbin Stripper

Precision Gear Division of Perfecting Service Co., Charlotte, N. C., has developed a completely new bobbin stripper.

The new Jet Stripper removes roving from eight bobbins (8x4 to 14x7) simultaneously at a rate up to 200 y.p.m.



Using a jet stream of air, the Jet Stripper is said to remove the roving without damage to the bobbin and to deliver the reclaimed roving in a "fluffy" reworkable condition, ready for immediate reprocessing.

The new stripper operates on compressed air, using a jet stream of air at a low volume. A pressure regulator permits setting air pressure to give desired speed for handling any hank roving without breaking the roving.

It is a lightweight, portable machine that can be easily moved to any desirable spot in the card room, the company reports. The unit is said to be so simple that it can be operated by the roving tender or others as a spare-time or fill-in job.

(Request Item No. I-17)

Strapping Tool



The Model TH tensioner, developed by Signode Steel Strapping Co., Chicago, Ill., is a fast, manual action strapping tool, with self-energized feed wheel that holds high tension. It takes strapping directly from the coil and is said to save a foot or more of strap every time it is used. Any type seal can be used and the seals can be placed either in front or behind the tensioner. Lightweight and easy to use, the unit weighs only 6 lbs. It is said to make vertical or horizontal strapping easy. Takes strap sizes from ¾ x .028" to 1¼ x .050"—waxed, painted or coated.

Model TH is said to be light and maneuverable, and can easily be removed from under the strapping after sealing.

(Request Item No. I-18)



Keep Cloth Rolls Straight with *Star-Grip Tubes**

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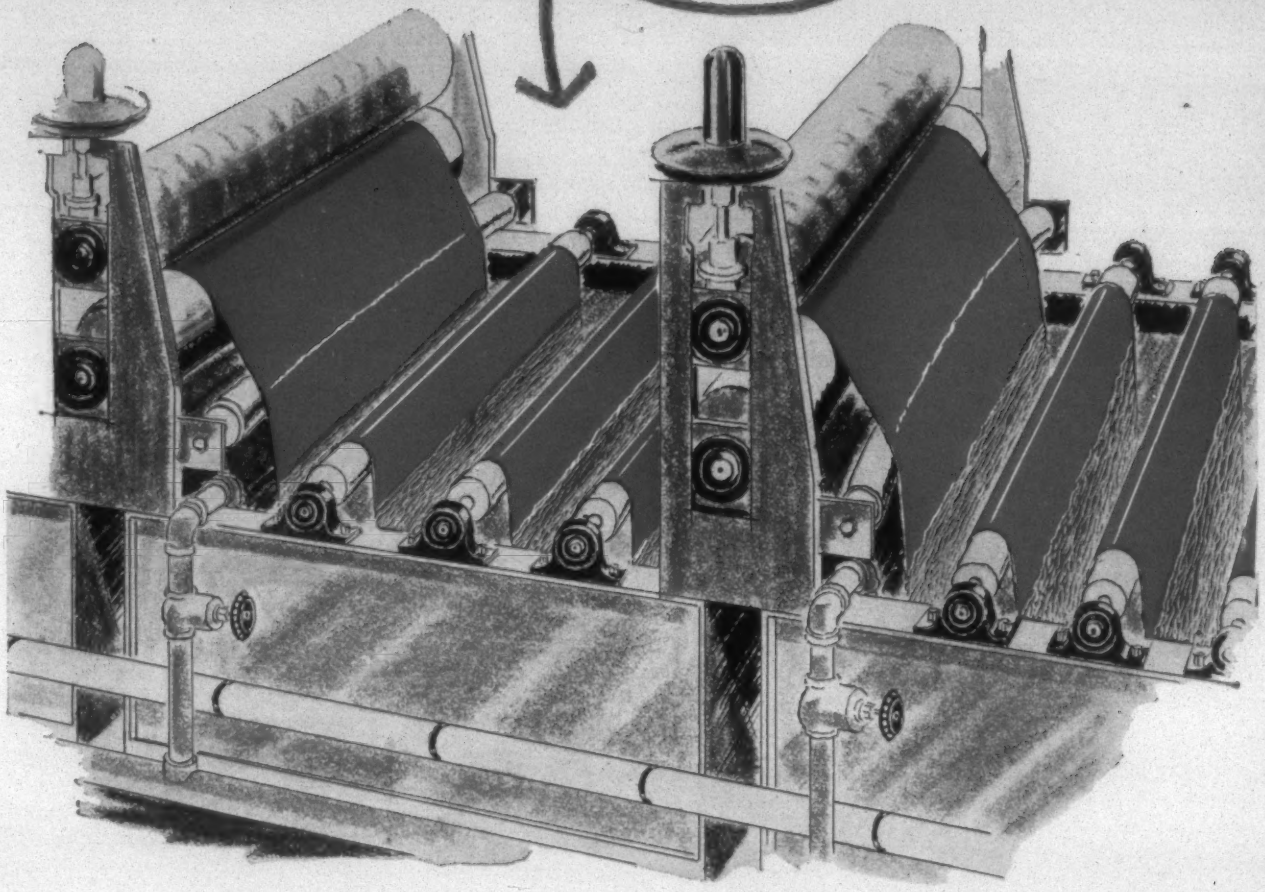
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For the Mill Bookshelf

Super Wedge Drives

Maurey Mfg. Corp., Chicago, Ill., is making available Catalog SW-1 describing its line of Super Wedge Drives. The catalog is designed to provide engineering data essential to proper drive selection and installation.

Maurey's new line is said to reduce drive size as much as 50% and to permit drive cost reductions as substantial as 20%. The Super Wedge Drive is said to have the ability to handle big power loads with smaller sheaves, narrower belts, fewer belts, less weight and less space. New high-strength metals in the sheaves and tough new fibers and synthetic rubbers in the belts are said to provide sinew without bulk.

(Request Item No. I-19)

Selecting Timing Belt Drives

Bulletin 21103 from T. B. Wood's Sons Co., Chambersburg, Pa., describes how to select timing belt drives. The bulletin includes five sets of curves for drive-width selection, developed by Wood's engineering department to eliminate tedious computation.

It gives five steps for choosing the proper timing belt. The method of computation is illustrated by a sample problem and the example is followed through each of the five steps.

(Request Item No. I-20)

Temperature Regulators

OPW-Jordan Corp., Cincinnati, Ohio, has published a new catalog giving full information on its complete line of sliding gate and plate temperature regulators. Designed for use on steam, water, air, oil, gas or chemicals, the regulators control temperatures from 35 to 450° F., at pressures up to 250 p.s.i. Self-operated and pilot-operated temperature regulators and combination temperature/pressure regulators are illustrated by photos, cut-sections and line drawings. Accessory items are also described.

Bulletin J180-1 explains the operation of sliding gate and plate seats, and shows how the valves are self-cleaning and self-lapping. The catalog includes features, applications, sizing charts, flow curve, sample specifications and complete engineering information.

(Request Item No. I-21)

Flow Rack

A new 8-page, 2-color bulletin offered by the Rapids-Standard Co., Grand Rapids, Mich., describes the principles, operation and installations of Rapistan flow rack for live storage.

Six advantages of flow rack live storage are discussed in the bulletin and illustrated by diagrams and photographs of eight typical flow rack installations.

New snap-on fittings that provide maximum flexibility in flow rack construction and adaptation are discussed and illustrated along with the five basic types of trackage offered.

(Request Item No. I-22)

Felt Application Guide

A new 8-page illustrated booklet describing some of the varied uses of the 800 types of specifically-designed A-Plus felts manufactured for industrial and decorative uses is available from the American Felt Co., Glenville, Conn.

(Request Item No. I-23)

Ten-Year Forecast

The nations of the free world will attain a more than 50% rise in production and a 20% gain in population during the next ten years, according to a new international study being offered by McCann-Erickson, New York advertising agency.

In commenting on the international business outlook, McCann-Erickson said: "For the first time in two decades, world production capacity is equal to current demands. This will confront the businessman with intensified competition.

"At the same time, world demand and capacity are starting unprecedented expansion. This will bring the consumer a wider range of choices.

"With demand for the essential commodities of life now reasonably satisfied in large sectors of the free world, markets for a long list of relatively non-essential goods and services are likely to develop at an accelerating rate."

The 10-year forecast is entitled, "The Decade of Incentive." It was prepared by economists of Marplan, the marketing research affiliate of McCann-Erickson.

The report includes a separate section with 33 charts. All information is printed in five languages — English, French, German, Spanish and Portugese.

(Request Item No. I-24)

Magnetic Valves

The features, models and construction data of its magnetic gages are covered in a new 6-page, 2-color catalog from Jerguson Gage & Valve Co. These liquid level gages are designed for use where glass and gaskets cannot be tolerated and where a sealed container for the liquid is preferable.

(Request Item No. I-25)

Dryers

Andrews & Goodrich, Boston, Mass., a division of Midland-Ross Corp., has issued a 12-page bulletin describing its extensive line of dryers for the textile industry. Included in the units described and illustrated are radiant heat dryers, tenter dryers, dye range dryers (main and predryer), curing and heat treating equipment, loop dryers, and stock dryers; also accessory equipment such as panels, nozzles, heaters, and an extensive line of laboratory and testing units.

(Request Item No. I-26)

Steel Lockers

A new 24-page catalog describing the Penco line of steel lockers is available from the Penco Division, Alan Wood Steel Co., Oaks, Pa. Catalog No. 6000 illustrates and describes nine locker styles for use in industry.

The Penco units covered are: single, double and multiple tier lockers, basket racks, etc. In addition to illustrations

and descriptions, complete dimensional information is given for each style.

Also presented in the catalog are Penco locker design and construction features. These include full-loop door hinge, tier head construction, intermembered door frame, fixed door handle and the new Auto-Lock, which eliminates locker door handles by using a heavy-duty key to operate the latching mechanism.

A planning aids section provides basic locker information designed to aid in planning an efficient, economical locker layout. Complete specifications and tips on ordering simplify purchasing.

Other Penco storage equipment detailed in Catalog 6000 includes: clip-type and standard bolt-type shelving; steel counters; wardrobe and storage cabinets; and book case shelving.

(Request Item No. I-27)

Latex Resin

Technical data on its new polyvinylidene chloride latex, Resyn 3600, has been compiled into a special booklet by the resin division of National Starch & Chemical Corp., New York City.

The booklet, Technical Bulletin 340, supplies all key information necessary for evaluation by laboratory and production personnel.

Resyn 3600 is an aqueous dispersion of vinylidene chloride copolymer. Because of its combination of barrier and application properties, the new product is expected to find wide usage in the textile industry.

Bulletin 340 describes fully the physical and chemical properties of Resyn 3600, both in latex and film forms.

(Request Item No. I-28)

Weighing Attachment For Fork Trucks

A new catalog, SS-1665, illustrates and describes the Model A-5 Baldwin-Clark weighing attachment for fork trucks which is produced by the industrial truck division of Clark Equipment Co., Battle Creek, Mich.

The electronic weighing attachment is said to make possible the in-transit weighing of loads by fork trucks and to eliminate the need for weighing loads at platform scales. The load is weighed as it is picked up and weight is indicated on small console mounted on the truck's instrument panel.

The 4-page, 2-color catalog explains the design and step-by-step operation of the weighing attachment. Line drawings show how load cells are mounted on fork truck front carriage. A cutaway view of the load cell is also shown. A table of capacities and dimensional specifications is included.

Model A-5 Baldwin-Clark weighing attachment can be installed on most gas and electric Clark fork trucks of 3,000, 4,000 and 5,000-lb. capacities. Trucks equipped with the attachment can be used for such jobs as checkweighing receivables, weighing intra-plant shipments and weighing materials for batch process operations.

(Request Item No. I-29)

Steel Strapping Tools

A new folder from Signode Steel Strapping Co., Chicago, Ill., is designed to aid in tailoring the strapping tool to the package job.

A Signode combination tool performs four functions: tensions strap, applies seal, makes joint, and cuts strap. Detailed descriptions and a chart of specifications and applications help to select the one Signode combination tool most efficient for the job in mind. Described are four basic combination tools and their 14 variations.

(Request Item No. I-30)

Switchgear

A new bulletin describing in detail its completely redesigned line of 4160-volt metal-clad switchgear has been published by I-T-E Circuit Breaker Co., Philadelphia, Pa.

The 2-color 20-page bulletin gives comprehensive information on the complete line of indoor and outdoor—both minimum depth and walk-in type—equipment which is available in ratings through 3000 amps. continuous current and 250 m.v.a. interrupting capacities.

New design features of the equipment, in addition to its compactness, include stored energy closing, a new closed door horizontal drawout mechanism, a new concept of arc extinction—the ironless blow-out coil—and one-man maintenance.

Construction and performance features, ratings and dimensions are furnished in the bulletin.

The bulletin is illustrated with photographs, sketches, diagrams and drawings and includes charts and tables for detailed engineering information.

Separate sections provide drawings, dimensions, preferred locations and arrangements of the various circuit elements for indoor and outdoor type equipment, respectively. Panel layouts and dimensions for standardized units are provided in a two-page layout.

(Request Item No. I-31)

Stretcher-Sealers

A bulletin which provides technical data and design features on Strapbinder combination stretcher-sealers for application of flat steel strapping has been published by A. J. Gerrard & Co., Des Plaines, Ill.

Details are given on Models 2302 and 2303 magazine seal-feed combination stretcher-sealers which combine all strapping operations — tensioning, automatic placement of seal, sealing and cutting of strap—in one operation.

Models 2320 and 2325 combination stretcher-sealers, also described and illustrated, are adjustable for various strap widths and will tension, seal and cut-score in one operation.

Photographs show various applications of the tools strapping export crates, corrugated cartons and unitized loads of small cartons.

(Request Item No. I-32)

Color Index

The "Color Index, Second Edition" nomenclature has been adopted exclusively by the U. S. Tariff Commission publication *Synthetic Organic Chemicals, U. S. Production and Sales* and by the Bureau of Customs on American offerings and importations. The "Color Index" is published by The Society of Dyers & Colourists (British) and the American Association of Textile Chemists & Colorists in four volumes totaling 3,152 pages.

These four volumes establish a new international language for dyes and pigments and include information on methods of application, colorfastness, chemical structure, characteristic reactions, index of products and tradenames, fastness tests and rating methods, new and old Color Index Numbers, Schultz and A.A.T.C.C. prototype numbers, and a hue indication chart.

The "Color Index, Second Edition" or further information may be obtained from the American Association of Textile Chemists & Colorists, Box 28, Lowell, Mass.

Serving The Textile Industry

Whitin Reports 6-Month Sales Of $35 Million

Whitin Machine Works, Whitinsville, Mass., reports unaudited net income of $2.5 million on sales of $35 million for the first six months of 1960. In a report to stockholders, J. Hugh Bolton, president, pointed out that the company operated at a very high level of capacity during the first half, and that while the second half probably wouldn't be as good, the company was headed for "a very fine year."

Draper Corp. Sales Up In First Half Of Year

For the six months ended July 2, the Draper Corp. reports earnings of $1.8 million on sales of $31.2 million, compared with earnings of $797,000 on sales of $24.3 million in the corresponding period last year.

The increase in earnings was said to be due largely to a good volume of sales of improved models of standard looms and to a 50% increase in shipments of Draper's shuttleless loom. Additional orders for the shuttleless loom are booked into 1961.

The company reports that it is "sold well into tthe first quarter of next year." It also announced that a new 50,000-square-foot plant will be established in Marion, S. C. Initially this plant will manufacture wood and metal products for use in serving the company's textile customers in the South. Relocation of these products in the South, together with other cast iron products already moved to the East Spartanburg, S. C., plant this year is enabling Draper to make important rearrangements of the home plant in Hopedale, Mass. It is anticipated that this realignment of facilities will reduce manufacturing costs.

F. A. Young Machine Co. Forms Subsidiary Firm

The F. A. Young Machine Co., Gastonia, N. C., announces the separation of its general repair and parts business from the main company. This aspect of the company's business will be incorporated as a subsidiary. Morgan Ruppe, a former sales employee, will head the new subsidiary as vice-president and manager. James A. Rayfield, former plant superintendent of Ideal Machine Shops, has been named plant manager of the new company. The newly formed subsidiary will be known as F. A. Young Textile Repairs Inc.

Operations of the new company will be in the Price Street building in Gastonia. It will also handle the Norlander presser. The company has just purchased the machinery and equipment of the Norlander Machine Co., New Bedford, Mass., and is moving it to Gastonia. David Pearson, plant superintendent of the Norlander Machine Co., will join Young to be in charge of presser manufacturing operations.

Hayes To Represent Manton-Gaulin In South

Manton-Gaulin Mfg. Co., Everett, Mass., has announced the appointment of Hayes Textiles Inc., Spartanburg, S. C., as exclusive sales representative to textile manufacturing and finishing plants for the eight-state Southern territory.

Hayes will handle the sales program of Gaulin textile homogenizers and other equipment for textile mills in Virginia, North Carolina, South Carolina, Georgia, Tennessee, Alabama, Mississippi and Texas.

Du Pont Co. To Expand Seaford Nylon Plant

The Du Pont Co. has announced plans to spend more than $9 million to modernize and expand facilities at its Seaford, Del., nylon plant.

The major project, aimed primarily at increasing production of 501 nylon carpet fiber through the use of improved technology, will begin immediately. It is in addition to earlier expansions for production of the 501 product. The new facility is expected to be in operation within the next 12 months.

The company pointed out that behind this activity is the overwhelming acceptance of Du Pont 501 carpet nylon which was introduced to the trade commercially just two years ago. It also is expected to find a significant market in pile upholstery for home furnishings.

Armstrong Cork Co. Moves Industrial Division To N. Y.

The Industrial Division of Armstrong Cork Co. will relocate its New York City sales offices to Rockefeller Center early in 1961. Armstrong's other New York City sales and showroom facilities will also move to the new location.

The new offices will be located at 60 West 49th Street, in the heart of Manhattan's Rockefeller Center complex. A ground-floor showroom in the same building will feature the newest product developments of Armstrong's floor and building products divisions. Armstrong will vacate its spaces in the Textile Building, 295 Fifth Ave., at the close of the year. Armstrong's Industrial Division markets a variety of products for the textile and other industries.

Wica Chemicals Inc. Adds New Pilot Plant

Wica Chemicals Inc., Charlotte, N. C., has installed an additional pilot plant to shorten the time it takes to get field tested developments into commercial production. Innovations in the basic design of the new pilot plant incorporate unique methods of control to assure flexibility in the engineering approach. Mechanical modifications and experimental polymerization units can be moved quickly and efficiently into the system.

Crompton & Knowles Profit Improves In First Half

Net earnings of $1.4 million on sales of $14.5 million have been reported by Crompton & Knowles Corp. and subsidiaries for the six months ended June 30. This compares with earnings of $592,000 on sales of $10.5 million in the comparable period of 1959.

The results include the operations of Althouse Chemical Co., Carl N. Beetle Plastics Corp., Firmaline Prod-



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ucts Division, Crompton & Knowles of Canada Ltd., Crompton & Knowles International Ltd., Crompton & Knowles Jacquard & Supply Co. and Crompton & Knowles Packaging Corp.

The company has announced plans to substantially expand both its package machinery and plastic subsidiaries. The project will involve Crompton & Knowles Packaging Corp. and Beetle Plastic Co.

In September ground will be broken for a new 55,000-square-foot plant for the packaging firm. The plant is expected to be in operation by June 1961. The Beetle Plastic plant will be expanded from 43,000 square feet to 64,000 square feet. This expansion is expected to be completed by January 1961.

Du Pont Sales Up, Profits Off In The First Half Of 1960

The Du Pont Co. has reported lower profits on record sales for the first half of 1960. Earnings of $3.05 a share on total sales of $1.097 billion as compared with earnings of $3.34 a share on earnings of total sales of $1.068 billion in the first half of 1959 were reported by the company.

The reduction in first half earnings is attributed by the company to increasing competition in the chemical industry, accompanied by lower price trends. The company reported that this competition had been felt particularly in the field of synthetic fibers such as nylon.

Leesona Breaks Ground For $3.5 Million Plant

Leesona Corp. broke ground August 11 for a $3.5 million plant in Warwick, R. I., to modernize its textile and coil winding machinery operations. The one-story, 450-square-foot plant will replace the company's present facilities in Cranston, R. I., which is about four miles north of the 70-acre Warwick site. The plant is scheduled for completion in November 1961, and the transfer of all operations from Cranston to Warwick is expected to be finished by December 1961.

The Warwick plant will result in greater operating efficiencies and a substantial reduction in repair and maintenance costs, Robert Leeson, president of Leesona, said. It will also enable the company to handle additional volume without any expansion of production space. A major consideration in choosing the nearby Warwick location was that it permitted the retention of the company's present employees, a highly skilled and trained labor force. The Warwick operation will require the same number of people as are now employed at Cranston.

Record Profits And Sales Reported By Allied Chemical

Record profits and sales for the second quarter and first half of the year have been reported by Allied Chemical Co., New York City. For the quarter ended June 30 a net profit of $17.4 million on sales of $217 million was reported. This compares with earnings of $16.5 million on sales of $203 million in the second quarter of 1960.

For the six months ended June 30, net profit was $30.9 million on sales of $401 million against profit of $27.9 million on sales of $372 million in the first six months of 1959.

Roberts Has Record Sales In The First Half Of 1960

Sales of the Roberts Co., Sanford, N. C., for the first half of fiscal 1960 ended May 28, rose to a record high for any six-month period. Earnings were also up substantially, marking a sharp reversal from the loss in the like period of 1959.

First half sales totalled $3.9 million with net profit of $160,430, as compared with sales for the first half last year of $1.9 million and a net loss of $149,125.

Sales are running approximately 50% above 1959, the company reports. Total sales for 1960 should amount to close to $7.5 million as compared with $5.3 million for fiscal 1959, the company estimates.

Roberts reports that its licensee in England is progressing with tooling to manufacture Arrow Spinning Frames for the European market, and that an interesting volume of business has already been booked.

Barber-Colman Orders Philco Data Processing

The Barber-Colman Co., Rockford, Ill., has contracted with Philco Corp. for the lease of a Philco 2000 electronic data processing system.

The fully transistorized computer will be used for business data processing and is scheduled for delivery within the next 18 months. It will be used initially for material control and production planning, machine center loading, order scheduling for payroll and labor distribution and work-in-process.

Becco Chemical Division Moves To New York City

The Becco Chemical Division of Food Machinery & Chemical Corp., Buffalo, N. Y., is moving its administrative and sales headquarters to 161 East 42nd St., New York 17, N. Y.

National Vulcanized Has Decline In Sales, Profits

National Vulcanized Fibre Co., Wilmington, Del., reports first half sales of $13.2 million, an 8% gain over sales of $11.9 million for the comparable period last year.

Net earnings for the first six months of 1960 were $876,000 as against earnings of $861,000 for the first half of 1959.

National sales for the second quarter of 1960 totaled $6.4 million, approximately the same as sales for the second quarter of 1959.

Sales Up, Profits Down At National Starch Corp.

The National Starch & Chemical Corp., New York City, reports net income after taxes of $832,000 on sales of $14.1 million in the quarter ended June 30 as compared with earnings of $858,000 on sales of $13.6 million in the comparable period of 1959.

For the six months ended June 30 the company earned $1.6 million on sales of $27.5 million as compared with approximately the same earnings on sales of $25.9 million in the first six months of 1959.

Chemstrand Research Center Moves To North Carolina

Chemstrand Research Center has begun the complex relocation of its entire facility from Decatur, Ala., to new multi-million dollar quarters in the Research Triangle Park near Durham, N. C. Some 185 families and tons of laboratory equipment will be involved in the 600-mile move scheduled to be completed by the end of the first week in September. Beginning with an estimated 300 employees this Fall, the center is designed to accommodate 500

persons by 1963. The Research Triangle area is created by the three cities of Raleigh, Durham and Chapel Hill, and so named because of the location in those cities of North Carolina State College, Duke University and the University of North Carolina. Educational and technical resources available at these schools was a major factor in Chemstrand's decision to build its new center in North Carolina.

Johnson Motor Lines Adding 163 New Trailers

The purchase of 163 new trailers as part of a $2.6 million equipment replacement and modernization program has been announced by Johnson Motor Lines, Charlotte, N. C. The trailers, of the latest 40-foot length design, brings the total pieces of equipment in the Johnson System to more than 1,100. Also included in the program are new operational headquarters including terminal and shops to be opened in Charlotte about September 15.

C&K Announces Acquisition Of Bates Chemical Co.

Crompton & Knowles Corp. has acquired Bates Chemical Co. of Lansdowne, Pa., manufacturer of color chemicals for the food and drug industries, in a further step toward increased diversification. The newly acquired firm will be expanded through affiliation with another C&K subsidiary, Althouse Chemical Division, chemical and dye producer.

Merger Of Lassiter Corp. With Riegel Paper Proposed

An agreement proposing the merger of the Lassiter Corp., Charlotte, N. C., into Riegel Paper Corp., New York City, has been signed by the boards of directors of the two companies. Both companies will convene special stockholders' meetings on or about September 28 to vote on the merger proposal.

Riegel is a leading producer of flexible packaging materials, bleached paperboard, pulp, folding cartons, and specialty papers. Lassiter is the largest independent converter of packaging films, specializing in the soft goods field. It also manufactures folding cartons, labels and laminates for many industrial applications.

Following stockholder approval and consumption of the merger, Lassiter would be operated as a division of Riegel and would continue under its present management.

Lower Sales Reported By American Enka Corp.

American Enka Corp., Enka, N .C., reports sales for the first 24 weeks of 1960, ended June 19, of $45.5 million compared with $49.9 million for the comparable period in 1959, when sales were the highest for any similar period in the company's history.

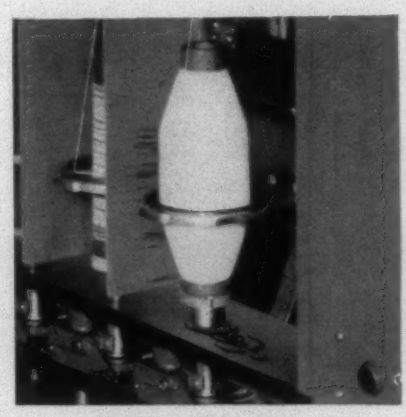
Net income for the first 24 weeks of this year was $683,000 as compared with $3.5 million for the same period in 1959.

Reduced shipments of Tyrex tire yarn and rayon staple are the major factors accounting for the lower earnings in 1960, according to the company.

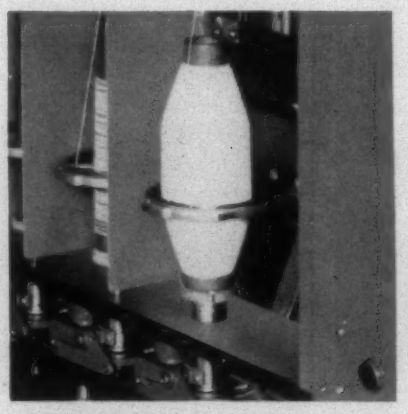
American Viscose Financial Position Reported Strong

The current financial position of American Viscose Corp. is particularly strong, according to a recent report

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Ordinary Oils Cause "Black" Yarn, Broken Ends



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from Harris, Upham & Co., investment brokerage firm of New York City. "Although American Viscose is still the leading domestic producer of rayon yarn and staple and an important producer of acetate yarn," the report continued, "this portion of the company's business is rapidly becoming of minor significance." This has been brought about by several highly profitable investments made by the company during the past ten years.

The most important of these, according to Harris, Upham, was the investment in Chemstrand Corp., 50% owned, which is the second largest producer of nylon.

Du Pont Spends $16 Million In North Carolina In 1959

More than $16 million was put into the economy of North Carolina last year by its two Du Pont plants.

Disclosing the results of its annual economic survey, the company reported that payrolls amounted to $14 million while purchases of goods and services from 929 North Carolina suppliers amounted to $1.8 million. The company operates a silicone plant at Brevard and makes Dacron polyester fiber at Kinston.

Ultrasonic Industries Constructing New Plant

Work has begun at Plainview, Long Island, N. Y., on a new plant for Ultrasonic Industries Inc., manufacturers of diSONtegrator ultrasonic cleaning machines. The company's growth since its inception in November 1959 has compelled the expansion to a new plant of 18,000 square feet with additional land set aside for doubling this capacity. The company, now located in Albertson, N. Y., expects to occupy the new facilities early this Fall.

Industrial Rayon Corp. Shows Loss In First Half

The Industrial Rayon Corp., Cleveland, Ohio, reports a net loss both for the second quarter and for the first half of 1960. A loss of $902,000 was reported for the first quarter on sales of $11.9 million. This compares with a net profit of $292,978 on sales of $15.7 million for the second quarter of 1959.

For the first half the loss totalled $1.4 million on sales of $24.9 million as compared with net earnings of $556,000 on sales of $31.2 million in the first half of last year.

The company said that second quarter operations were adversely affected by curtailment of production and regrouping of facilities for the manufacture of viscose fibers and by the start-up expenses related to increased production of filament textured nylon yarns and polypropylene fibers.

Bijur Lubricating Names Cotton-McCauley Agent

The Bijur Lubricating Corp., Rochelle Park, N. J., has appointed Cotton-McCauley Co., Pawtucket, R. I., as a distributor of Bijur lubricating systems to textile mills in the U. S. and Latin America.

Cotton-McCauley's Southern division at Greenville, S. C., will maintain a substantial inventory of repair parts and will make trial machine installations available to mills in the South.

In announcing the new arrangement, W. E. Durnan, Bijur general manager, and Frank H. Cotton, president of Cotton-McCauley, reported that it is the object of this distribution facility to give more personal sales and service attention, and to make possible fastest possible delivery of rush items. Bijur will continue to maintain its own sales contacts for new equipment.

Rayon Wash-Wear Finish Developed By Brancroft

The successful application of a non-resinous finishing process to rayon cloth is announced by Joseph Bancroft & Sons Co. The fabrics will be produced and marketed under the Everglaze BanCare trademark.

The new process makes possible the production of no-iron rayon fabrics and garments with a wash-and-wear rating between 4 and 5, making them commercially competitive with the finest cottons and synthetics on the market, Bancroft reports.

"For the first time," the company said, "rayon garments can be washed and dried by any normal method, at home or in a commercial laundry, and emerge soft, smooth, fresh, completely wrinkle-free and ready for wear. This process puts an end to the limp, shapeless, mussy look normally associated with rayons after laundering."

The chemical composition of the basic fiber is permanently altered, the company said, so that the improved wash-and-wear properties are not due to a special finish but rather to a complete and permanent transformation in the fabric itself.

As a result of this permanent chemical change in the fibers, Everglaze BanCare rayons are said to have many distinctive properties that are built right into the fabric, such as substantially improved wet and dry wrinkle recovery, durable dimensional stability, and a soft, pliable, non-irritating hand. They are said to iron themselves as they wash and dry and to stay fresh and resistant to mussing throughout the day.

The American Institute of Laundering has awarded its seal of approval to rayons produced by this new non-resinous process.

Give
The UNITED Way

Diamond Alkali Reports Record Sales, Earnings

Sales and net income of the Diamond Alkali Co., Cleveland, Ohio, established record levels in both the second quarter and first half. Sales in the first half were $71.5 million, an increase of 8% over the first half of last year. Net income for the period totalled $6.4 million, an increase of 23% over the first half of 1959.

Second quarter sales, the highest for any quarter in the company's history, totalled $38.6 million, an increase of 7% over the total for the second quarter of 1959. Earnings for the three-month period were $3.5 million as compared with $3.1 million for the comparable period in 1959.

The company said that it expects the demand for its products to continue at a high level for the coming months.

Celanese Has 4% Decrease In First Half Profit

The Celanese Corp. of America reports sales of $137.5 million for the six months ended June 30, representing an 8% increase over the 1959 first-half sales of $127.6 million.

Net income after taxes for the first-half amounted to $10 million, a 4%

decline from the $10.4 million earnings registered during the same 1959 period.

For the three months ended June 30, sales totaled $70.7 million and net income amounted to $5.2 million, as compared with sales of $68.7 million and earnings of $5.5 million reported for the second quarter of last year.

Celanese reported "substantial progress" in certain diversification and expansion projects. These include Celanese entry into tthe polyethylene packaging film field, commercial introduction of Arnel 60 triacetate and Fortrel polyester fibers, and newly approved expansion of plant facilities in Pampa, Tex., for producing acrylate esters, chemicals used in textiles and other products.

New High In Sales Profits Recorded By Dow Chemical

The Dow Chemical Co., Midland, Mich., has reported sales of $781 million and net earnings after taxes of $82 million for the fiscal year ended May 31. This represents a new high in sales and net earnings.

The sales increase was 11% over the preceding year and the net increase was 31%.

Dow paid $68 million in U. S. and foreign income taxes, an increase of 28% from the preceding year, and $218 million in wages, salaries and employee benefits.

Sales revenue was derived approximately 51% from chemicals, 36% from plastics, 7% from magnesium and 6% from agricultural chemicals.

The Duplan Corp. Reports Sales Up, Earnings Down

A net profit of $369,000 on sales of $23.4 million has been reported by the Duplan Corp., Winston-Salem, N. C., for the nine months ended June 30. The company reported that these figures include the operating results of two subsidiary companies acquired during the period and so are not comparable to figures for the same period in the preceding year.

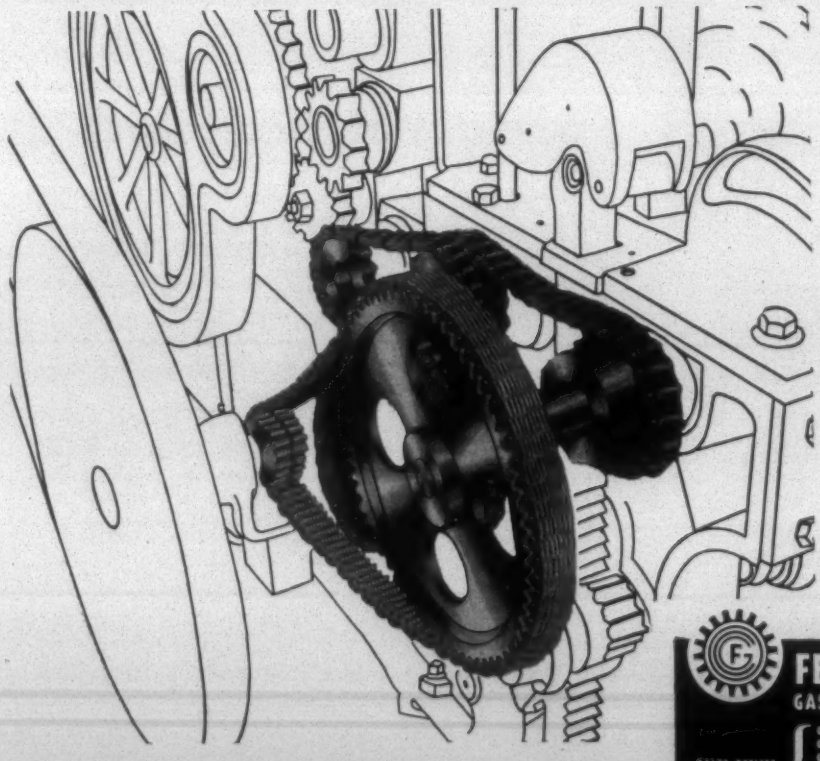
For the same period last year net profit was $649,000 on sales of $18.6 million. No provision for taxes was necessary in either period because of loss carry forward.

The company attributed the earnings decline primarily to the textile division. Newly developed high-speed equipment caused overproduction in the field of textured yarn, the company reported. It estimated that it will take another year for the demand for this yarn to catch up with the supply.

Fabrionics To Represent Rothschild Instruments

Fabrionics Corp. of Huntington, N. Y., has been appointed exclusive U. S. sales agent for Rothschild measuring equipment for the textile industry. Manufactured by Rothschild in Zurich, Switzerland, this line of control equipment includes such widely used devices as the Rothschild Tensotron, an electronic thread tension gauge that automatically measures and records tensions as low as 1/10 gram; the new Rothschild static voltmeter designed to quickly and precisely measure both static charges and conductivity, thereby permitting unusually close control of the static electricity that has long been a problem to synthetics manufacturers; and the Rothschild F-Meter for fast, accurate measurement of coefficients of friction in weaving operations.

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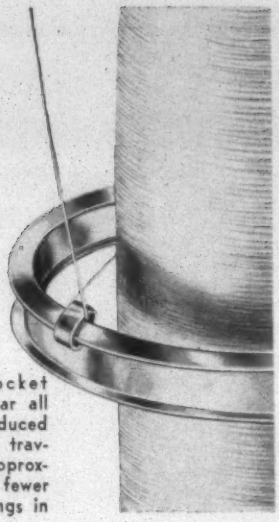
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MEMBER AMERICAN GEAR MANUFACTURERS ASSOCIATION

See the SACO-LOWELL booth

See

NEW VICTOR ROCKET TRAVELERS

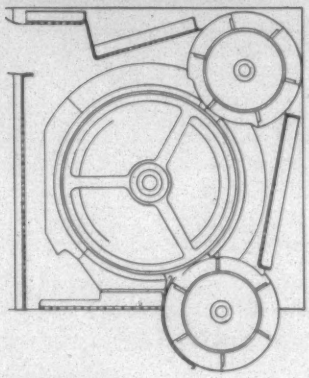


New, nickel plated Rocket Travelers outrun and outwear all others. "Down time" is reduced over 50%. The number of travelers used annually is cut approximately ⅔. The resulting fewer traveler changes mean savings in labor cost.

See New

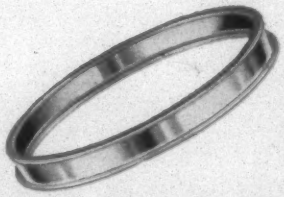
DOUBLE DOFFER CONDENSER

Increases the cleaning efficiency by removing a high percentage of dust and pepper trash. This extra cleaning is accomplished without fiber damage. This modernization changeover may be applied to existing Condensers at a very reasonable cost.



See

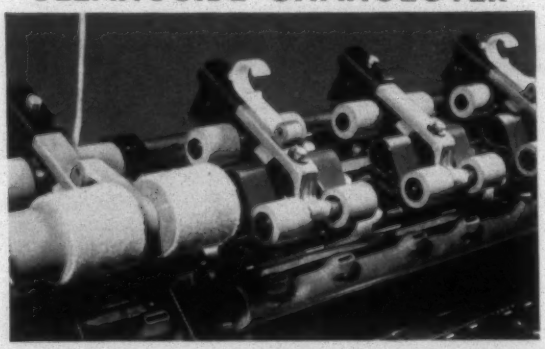
SACO-LOWELL RINGS



Only Saco-Lowell has the perfect Ring & Victor Traveler match. Extensive mill tests prove Saco-Lowell rings give the highest traveler speeds, the shortest breaking-in period and longest life.

See

CLEANGUIDE CHANGEOVER



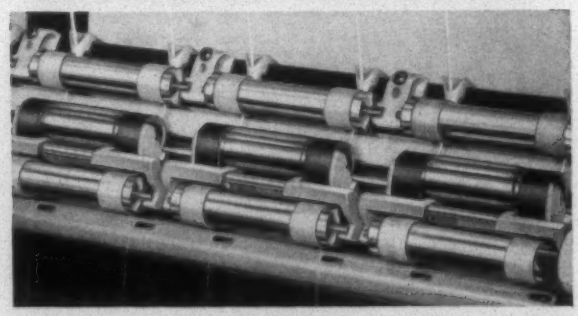
This modern, anti-friction drafting assembly is the low cost answer for spinning cotton and short staple synthetics. A major advance in double apron cleanliness — Cleanguide requires no oiling, only lubrication required is regreasing of front top roll ball bearings every two years.

Plus **other cost saving changeovers.**

See them at the Southern Textile Exposition Oct. 3-7, Booth 835A

See

MAGNEDRAFT CHANGEOVER



Now proven in full scale installations, all mills report that Magnedraft yarn is stronger, more even with less end breakage. Unique top front roll support allows quick "end around" piecing. Here unquestionably is the cleanest most efficient drafting element ever developed.

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textile bulletin

VOL. 86 SEPTEMBER 1960 NO. 9

Here's your guide to

The Twenty-First Southern Textile Exposition

OCTOBER 3-7, GREENVILLE, S. C.

ADDITIONAL space of more than 4,000 square feet has been arranged for the 21st biennial Southern Textile Exposition in Textile Hall and its annexes at Greenville, S. C., October 3-7.

Since the machinery and equipment show was established over four decades ago, each exposition has been larger than the preceding one and announcement by Textile Hall Corp. officials of the acquisition of more space assures that the 1960 event is to be no exception.

Two years ago the show attracted some 340 U. S. and foreign exhibitors of machinery, equipment, accessories and supplies. The exhibitors this year include virtually every manufacturer of basic processing machinery in every part of the U. S. and also exhibitors from several foreign countries.

Textile Hall and its eight permanent annexes, which cover the larger part of a city block in downtown Greenville, provide over 100,000 square feet of exhibit space.

Officials of Textile Hall Corp., which sponsors the show, decided against building yet another annex for the 1960 exposition. Interest in the event, however, has been heightened this year by a steady flow of technological refinements in machinery and equipment and an accelerating trend in the mill industry toward a relatively high capital outlay for plant modernization.

Unprecedented demand for space in the last few months led to a decision by Textile Hall Corp. to lease a building across the street from Textile Hall's main entrance and this building will serve as Annex No. 9 for the 1960 exposition. The additional exhibit area was necessary to meet the needs of several heavy machinery manufacturers, and the space will be used primarily for operating machinery.

For the 1960 show Textile Hall is undergoing a face lifting and sprucing up. Since October weather is unpredictable, the first floor of the building has been ventilated. The registration booth will be situated immediately to the right of the main entrance to the hall. As usual, all persons connected with textile manufacturing are invited to attend the five-day exposition. However, a new system of admission is being started at this year's show. Name badges will be provided all visitors and admission will be by badge only. One badge is good for the entire week.

Exhibitors are mailing personalized invitations to customers and Textile Hall is mailing invitations to persons in the industry. The invitations, when properly filled out, will serve both as registration card and badge insert. When presented at the registration booth, a badge will be issued.

As an aid to those attending the show, THE BULLETIN offers the following list of exhibitors with a brief description of what they plan to display. A reproduction of the Textile Hall floor plan is also included showing the floor location of each exhibitor's booth. The information given has been compiled from data supplied by exhibitors. All listings are not complete since in some instances no data was available from particular exhibitors at press time. In displays where some exhibitors are occupying more than one booth, only the lowest booth number is shown.

Abbott Machine Co. **813**
Greenville, S. C.
(1) Model II HR Radial Quiller winding tip bunches for automatically loading quills into Draper automatic filling magazine.* (2) Model 66/67 large package automatic winder winding onto 3°30′ cones containing from 7½ to 8½ pounds net yarn.

S. L. Abbott, W. L. Perry, L. S. Ligon, L. S. Ligon Jr., S. A. Roane, E. W. Skinner, F. L. Hendricks, A. P. Apple.

Abington Textile Machinery Works **829**
North Abington, Mass.
(1) Vacuum stripping system for revolving flat top cards.* Automatic remote controlled bottom discharge receiver. (2) Cardpen, a drafting at-

*Shown at Atlantic City.

Here's A Preview Of What's To Be Seen And Where To See It

The Greenville Show——

tachment to replace calender rolls on a cotton card which is said to provide a 20% increase in production rate without a loss in quality. (3) Hand knotters.*

John W. Burbine, W. W. (Pete) Brame, M. R. Bradley, Sumner Smith Jr., Oliver H. Ramo.

Acme Chain Corp. 903
Holyoke, Mass.
(See M. R. Snyder Co.)

Acme Steel Co. 356
Fabricated Materials Division
Chicago, Ill.
AIM brand rack, slotted angle and floor plate.

M. G. Niergarth, J. J. Burns, T. H. Ronan, D. C. Wade, R. M. Snodell.

Headquarters hotel: Greenville Hotel.

Acme Steel Co. 517
Acme Steel Products Division
Chicago, Ill.
Acme steel automatic pushbutton compression strapping machine with Model F7 strapping head that feeds and tensions the strap.

G. R. Easley, D. C. Jorgensen, S. F. Woodley, J. B. Farr, E. H. Jones, E. S. Lumpkin, J. N. McLean, J. B. Quarles, J. H. Scott, R. M. Snodell.

Acoustica Associates 506
Plainview, N. Y.
(See Electro Motion Corp.)

Chet Adams Co. 241
Greensboro, N. C.

Adams Inc. 447
Greenville, S. C.
Adamstop for roving and ring frames.

S. J. Adams, J. B. Adams, C. S. Adams, L. A. Deal, E. F. Walker, F. B. Bailey, W. A. Dean.

Addressograph-Multigraph Corp. 362
Cleveland, Ohio
(1) New Addressograph Optical Code Reader, Class 9500. Tabulated cards accumulated from various transaction sources are fed into the reader. The unit reads the code at the rate of 180 cards per minute. The cards are imprinted at the production point on an inexpensive, simple recorder. Used in conjunction, the tabulating equipment, computers or other accounting equipment will permit maintenance of accurate "in process" inventories. (2) Class 1946—with new features, permitting the imprinting of up to 1,500 cone labels or similar labels per minute. (3) Class 1947—for automatically preparing piece tickets for weaving mills. (4) Class 1948—for the preparation of hang tickets with string attached. Imprints up to nine lines for 40 characters of information, with automatic numbering—125 per minute. (5) Multigraph Model 2550 for order invoice writing and Model 750 for general duplicating.

N. J. Merette, D. F. Greene.

Akron Spool & Mfg. Co. 247
High Point, N. C.
Spobbins, twister spools, bobbins.

John Hawley, M. L. (Johnnie) Johnston.

Headquarters hotel: Holiday Inn.

Aldrich Machine Works 269
Greenwood, S. C.
(1) Finisher section of a single-process picker showing the high compression calender. (2) Air filter for cleaning dusty air in mills. (3) New blending feeder having a capacity for about twice as much cotton as conventional feeders, without any increase in the length of the feeder. This feeder has a new combing roll arrangement which opens cotton much better and blends it much better than is possible in previously existing feeders. (4) Pepper-Shaker opener following the blending feeder. (5) Feed table to receive cotton from the Pepper-Shaker.

A. P. Aldrich Jr., W. D. Wornall, Ben R. Morris.

Headquarters Hotel: Poinsett Hotel.

Allen Beam Co. 101
New Bedford, Mass.

Allen Bradley Co. 413
Milwaukee, Wisc.
A variety of electrical controls including a.c. full voltage starters, single-phase starters, reversing starters, pushbuttons, overload relays, pressure controls, etc.*

Roy E. Wilson, W. R. Calverley, R. M. Chastain, Wright W. Rodgers, James L. Howarth, LeRoy P. Spoon, L. P. Spoon Jr., John C. Lomax.

Headquarters hotel: Greenville Hotel.

Allentown Bobbin Works 316
Allentown, Pa.
Bobbins and spools for the processing of fine denier yarns such as silk, rayon, nylon and combination yarns.*

Headquarters hotel: Greenville Hotel.

Allied Chemical Corp. 262
New York City

The Louis Allis Co. 511
Milwaukee, Wisc.
(1) Syncro-Range, a packaged system consisting of an adjustable frequency power supply, operating on 3-phase, 60-cycle power input, which powers a number of Syncro-Spede motors running in exact synchronism over a wide range of speeds. The drive is said to be ideally suited for the operation of multi-unit conveyors; synthetic fiber spinning, drawing or twisting; and textile printing or finishing. (2) Inverted a.c. motor. (3) Syncro-Spede synchronous induction motor, a constant speed drive available in ratings up to 100 h.p. (4) A.C. Pancake motor which is 50% shorter than a standard flange motor of the same rating. (5) Clean-Flo enclosed textile motor, the shortest enclosed textile motor available. The unit meets N.E.M.A. mounting dimensions for complete interchangeability with all standard N.E.M.A. motors. The unit features a fan guard cover which forces air to change direction sharply, helping to keep lint out of the motor. (6) Transistor regulator panel. (7) Adjusto-Spede a.c. adjustable speed drive. The Adjusto-Spede is suitable for continuous operation at full load in ranges as high as 34:1. The speed is held precisely regardless of load changes.

M. E. Weitekamp, Jack Brown, L. A. Hearn Jr., J. R. Smith, B. R. Becker.

Headquarters hotel: Poinsett Hotel.

Allis-Chalmers Mfg. Co. 142
Milwaukee, Wisc.
(1) Textile motors Type GQ and Type GQZ.* (2) Open type Super-Seal motor.* (3) Lint-tight motor control.* (4) General purpose starters.* (5) Vari-Tex speed changer. (6) Ultra-Speed package drive.* (7) Close-coupled pump, Type C-2, for conditioned air.* (8) Fork-lift truck.

E. T. Cuddeback, C. B. Rumble Jr., A. W. Robinson, W. E. Watson, L. P. Gregory, C. B. White Jr., Robert McKee.

Headquarters hotel: Greenville Hotel.

American Air Filter Co. 434
Louisville, Ky.
(1) Auto-Airmat, an automatic, self-cleaning, dry-type air filter designed to provide for efficient economical collection and disposal of lint and fibrous materials. The filter not only collects heavy lint concentrations but wraps the collected material up into a roll for easy disposal. (2) The Electro-Matic Model F automatic electronic precipitator. The Electro-Matic is a

*Shown at Atlantic City.

Official Registrars

AS IN PAST YEARS, THE BULLETIN will again serve as official registrars for the Southern Textile Exposition. If we can be of service to you, please don't hesitate to call on us.

self-cleaning unit that combines electronic precipitation and automatic operation to provide for the most effective air cleaning.

H. J. Noles, Charles Anderson, Kirk Cousart, Tom Curlee.

Headquarters hotel: Poinsett Hotel.

American Lava Corp. 463
Chattanooga, Tenn.

AlSiMag ceramic thread guides.

J. B. Shacklett, J. W. Crisp, J. E. Hicks Jr., W. H. Cooper.

Headquarters hotel: Greenville Hotel.

American Moistening Co. 840
Cleveland, N. C.

(1) Amco Uniqlone lint collector, a combination vacuum and blower device which gathers in lint. (2) Amco ceiling cleaner for card rooms and roving frame rooms.* Oscillating twin propellor fans, with their axes set at 90° to each other, prevent accumulation of lint and fly on overhead structures, pipes, shafts and walls above the height of the machines. (3) Amco roving frame cleaner.* Single and twin air jet ports keep front of roving frame free of lint accumulations. Heliclone nozzle cleans back of frame, electronic control prevents roving damage. (4) Amco loom cleaner, ceiling mounted. (5) Amco Aero-Miser—water pressure and air pressure type of atomizer which is exceptionally economical in air consumption.* (6) Modulating interrupter for atomizer systems.* Automatically proportions the frequency and length of "on" cycles to eliminate fog and improve the quality of the mist. (7) No. 6 atomizer.* (8) Blow-Thru valve.* (9) Amco sling psychrometer.* (10) Amco Psychron.* (11) Automatic ventilating unit for ductless evaporative cooling.* (12) Model 35 humidifier. (13) Motion pictures of Amco's mechanical cleaning devices for the textile mill.*

Marvin McCall, Milton H. Irons, L. D. Terry, J. E. Townsend, Joseph Walmsley, J. D. Johnson, W. A. Mullins, J. Waldrip.

Headquarters hotel: Poinsett Hotel.

American MonoRail Co. 111
Cleveland, Ohio

Automatic vacuum cleaning and frame cleaning over spinning, roving and winding frames — including ceiling fans.* New type of loom cleaning. Cable-Way and chainless overhead conveyors.

C. L. Fell, R. McEachern, V. W. Cook, H. Joe Cleaton, John I. Browne, John Mikel, E. S. Murray, James Whitted, C. P. Newell, Henry McKinney, Carl Sheets.

Headquarters hotel: Greenville Hotel.

American Pamcor 125
Atlanta, Ga.

API solderless terminals and connectors for the manufacture, installation, maintenance and repair of electrical and electronic equipment.

Jack Cleason, J. A. Drury Jr., Joe Murphy, Jim Taylor.

Headquarters hotel: Poinsett Hotel.

American Pulley Co. 479
Philadelphia, Pa.

American Rieter Co. 820
West Caldwell, N. J.

(1) High-speed Pattern M DO draw frame* equipped with positively driven top and bottom lifter rolls over each can; patented polar drafting arrangement; central roll settings; pneumatic weighting of top rolls; cans up to 18x42"; speeds up to and over 600 f.p.m. (2) Model F 1 slubbing frame* which is said to provide elimination of count variation from empty to full bobbin and elimination of count variation between front and back spindle lines. Other features of the slubber are: special cam control builder motion; a new device to afford fractional tooth tension adjustment between front roll and flyer; guide saddle top roll suspension; new design high speed aluminum flyer equipped with rubber tip. (3) A scale model of the Automixer will be in operation. Automixer is a large capacity fiber mixing machine placed immediately behind the blending feeders. Its purpose is to eliminate human and mechanical errors in the mixing of various types of cottons. The unit is 46' long and 5½' wide. Its mixing ability is realized through the feeding of cotton, layer upon layer, into the body of the machine, transporting those sandwich layers towards one end, and slicing through them vertically with a spiked apron thereby achieving a cross-cut of a large volume.

John F. Dulken, Rene O. Halter, Hans Klaeui, Hansuli Suter, Will Plowden.

American Safety Table Co. 234
Reading, Pa.

American Stock 429
Gear Division
Perfection Gear Co.
Harvey, Ill.

(See Ira M. Valentine)

American Viscose Corp. 221
Industrial Packaging Department
Philadelphia, Pa.

Avistrap high-tenacity rayon cord strapping and a new mechanized strapping tool which will handle all widths of Avistrap from ¼ to ¾".

Robert K. Scharff, Michael Derickson, William M. Carney Jr., James E. Talbot, Alfred M. Lynch, Herbert C. Schafer, Dale Hodges, Richard Mueller, Troy Christopher, David Collingwood, Leonard Brown, Charles Nicholas.

——The Greenville Show

America's Textile Reporter 225
Boston, Mass.

Anheuser-Busch Inc. 513
St. Louis, Mo.

Abinco gum, A-B thin boiling starch, A-B pearl starch and A-B dextrine.

Richard F. Amacher, A. H. Luetkemeyer, Walter P. Hope, C. J. Liebman, Theodore M. Hampton Jr., Jack S. Abell.

Headquarters hotel: Greenville Hotel.

Armstrong Cork Co. 816
Lancaster, Pa.

Drafting rolls, aprons and loom supplies. In addition to products, Armstrong will show a new laboratory spinning unit in operation and nine current methods of high draft spinning.

T. L. Hill, J. V. Ashley.

Armstrong Machine Works 439
Three Rivers, Mich.

A glass model of the inverted bucket trap will be shown in operation on 7 lbs. of steam pressure.* Also models of steam traps, humidifiers and scoops will be shown.*

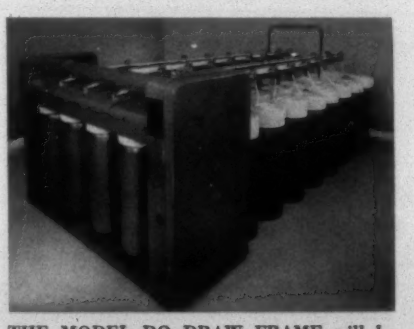
O. E. Ulrich and others.

Headquarters hotel: Catalina Motel.

Ashworth Bros. Inc. 122
Fall River, Mass.

(1) Card clothing for cotton, wool, worsted, synthetic, rayon and asbestos cards. Brush clothing and card clothing for special purposes, including hardened point, plough ground and side ground card clothing. (2) Flat clothing—both regular and hardened point for solid, split or flexible metallic flats. (3) Metallic wire for cotton, woolen, worsted and synthetic cards.

*Shown at Atlantic City.

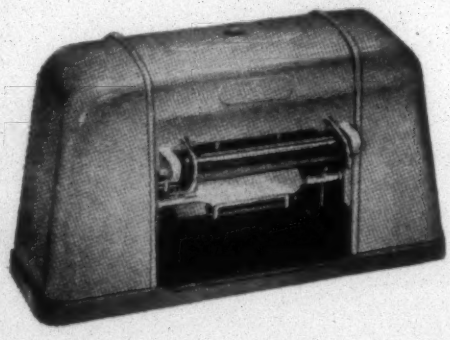


THE MODEL DO DRAW FRAME will be one of the features of the American Rieter Co. exhibit in Booth 820. The new frame offers such features as positively driven top and bottom lifter rolls over each can; a patented polar drafting arrangement; central roll adjustment with a scale to show settings; and speeds up to 600 f.p.m.

In these highly competitive times, you should investigate the

ABINGTON

CARD ROOM DEVICE



. . . which replaces calendar rolls and increases cotton card production up to 20% without loss of quality.

- LOW IN PRICE
- SIMPLE TO INSTALL

Write for literature

Made by Soc. Francais Cardpen
Exclusively represented in U.S. by . . .

ABINGTON TEXTILE MACHINERY WORKS

Plant:
North Abington, Mass.

Southern Sales Office:
Calhoun Towers
Greenville, South Carolina

Executive Offices:
19 Congress Street
Boston, Massachusetts

The Greenville Show——

Also lickerin wire and garnet wire. (4) Flexible bend grinding.

R. C. Ashworth Jr., W. J. Flynn Jr., H. Ashworth, A. E. Johnston Jr., J. E. Seacord Jr., W. G. Halstead, F. L. Armitage Jr., R. C. Ashworth III, Ray Clary, Michael Croce, T. F. Hart and C. C. Withington Jr.

Headquarters hotel: Holiday Inn.

Atkinson, Haserick & Co. 817
Pawtucket, R. I.

Atlanta Brush Co. 420
Atlanta, Ga.

Special purpose brushes developed for the textile industry and general industrial brushes.

W. C. Perkins, R. C. Hutchins, G. B. Snow, A. W. Dillard, Ansel McNeill, Jack Nelms.

Headquarters hotel: Greenville Hotel.

Bahan Textile Machinery Co. 140
Greenville, S. C.

Loom parts.

W. L. Wilson, C. L. Greene, W. H. Maulding, W. R. Rothrock, C. L. Pickens, L. O. Talley.

The Bahnson Co. 830
Winston-Salem, N. C.

(1) Cross-Jet traveling spinning frame and ceiling cleaner.* (2) Vacu-Pak traveling floor sweeper (vacuum).* (3) Collecto-Vac vacuum collector of broken ends and fly for spinning frames.* (4) Humiduct unit air conditioning system.* (5) Open-Aire spinning frame creels.* (6) New stationary ceiling cleaner—being shown for the first time.

A. H. Bahnson Jr., A. E. Thomas, W. M. Fulp, I. L. Brown, W. F. Walters, U. G. Browning, S. B. Blanton, R. B. Crosland.

Headquarters hotel: Poinsett Hotel and Holiday Inn.

Baker Industrial Trucks 834
Division Otis Elevator Co.
Cleveland, Ohio
(See Baker Mfg. Co.)

Baker Mfg. Co. 834
Greenville, S. C.

Bamco textile leathers; Baker industrial trucks, Models FGD-030 and FTD-020; Moto Truc Model TEL-E-F; canvas baskets; E-Z lifts.

Carl Baker, Mrs. Carl Baker, Gerald Blume, Marshall Dreitzler, Bob Sickman.

Headquarters hotel: Greenville Hotel.

*Shown at Atlantic City.

William Bal Corp. 838
Elizabeth, N. J.

A variety of materials handling devices of vulcanized fibre including mill boxes, tote boxes, tote-conveyor boxes, box trucks, open side box trucks, drop front box trucks, doffing trucks, waste hampers, telescope cases.

Ned Wilson, Herbert Gill.

Headquarters hotel: Holiday Inn.

Band-It Co. 321
Atlanta, Ga.

Barber-Colman Co. 254
Rockford, Ill.

(1) Model 66 gSH warp drawing machine.* (2) Model 56" MC portable warp tying machine with 56" MF warp frame. (3) Model 15" LC portable warp tying machine.

F. D. Taylor.

The Bassick Co. 411
Bridgeport, Conn.

The full line of Bassick casters and position locks including special textile casters. The casters are of both the swivel and rigid types.

Richard Bragdon, Ed Ripley, Bob Rubee, Bill Gresham, George Biggs.

Headquarters hotel: TraveLodge Motel.

Batson Mfg Co. 223
Greenville, S. C.

A variety of accessory equipment including felt and neoprene machine mounts, harness adjusters, dobby stirrups and loops, cone holders, temple rolls, card coilers, all types of clearer rolls, drives and transmitter gears.

John O. Batson Jr., Ted Ruwitch, Dave Murphy, Dewey Williams, Billy Flynn, Jim Manley, Lee Beaudrot, H. E. Runge, Jim Christopher, Roy Noble, Harry Cannon, Lee Shook, Ed Carman, Bill Wallace, William R. Fox, John Farish, Sonny Alford, Charles Mount, J. S. Jenkins, Royce Cannada, Louis P. Batson Jr., H. Elliott Batson, Anne Wilson, Catherine Arledge, Betty Quist, Ruth Heaton.

Edward H. Best & Co. 268
Boston, Mass.

Action model of rubber compressive shrinkage belt. Felts and fabrics used by the textile industry as machine parts.

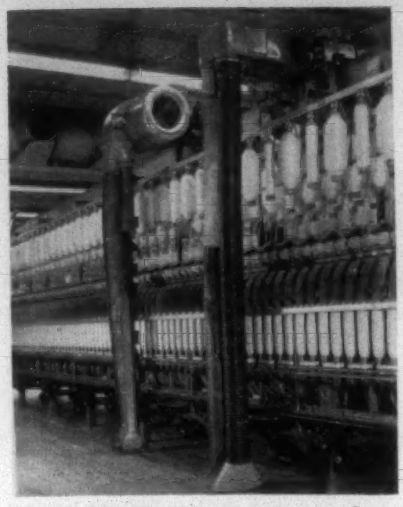
B. C. Yates Jr., W. C. Hames, I. F. Kelley.

Birch Bros. Inc. 248
Somerville, Mass.

Textile finishing machinery, cloth handling equipment, mill sewing machines.

Clifford W. Birch, Richard Briggs, John C. Crosby.

Birdie Co. 903-A
Greenville, S. C.
(See Frontier Electronics)



THE BAHNSON CO. will feature its Cross-Jet spinning frame cleaner with Vacu-Pak floor sweeper in its exhibit at Booth 830. Bahnson will also introduce a new stationary ceiling cleaner.

Benjamin Booth Co. 464
Philadelphia, Pa.
(1) A complete line of super-precision metallic card clothing made by Graf of Switzerland. A projection microscope will demonstrate the superior accuracy and sharper teeth resulting when metallic wire is milled rather than punched. (2) A new line of card room machinery and supplies from Switzerland. (3) Orion measuring device for determining eccentricity and for setting parallelism of various carding and grinding rolls. (4) Swiss flexible card clothing and card flats of special construction for specific carding applications. (5) Recent improvements in Booth's patented needle-point grinding process, Micr-O-Grind, and Supr-O-Tape condenser tape for woolen cards.

E. Allen Snape Jr., Norman Bush, William Gill, Wilson Hurley, Richard Hurley, Henry Harrison, Charles Stover, Edwin Snape.

Boston Gear Works 212
Quincy, Mass.
(See Greenville Textile Supply Co.)

Boston Woven Hose & Rubber Co. Division American Biltrite Rubber Co. 102-A
Boston, Mass.
Boston Bull Dog rub aprons, Boston belting (flat and V) and Boston industrial and fire hose.

Alfred E. Lyon, W. A. Sheehan, S. J. Clifford, F. S. Coole, R. J. Sydnor III.

Headquarters hotel: Holiday Inn.

The Bouligny Co. 474
Charlotte, N. C.
(1) A rebuilt spinning frame. One side will have the complete Bouligny Tru-Draft drafting system utilizing Whitehead Permalube cap bar nebs and saddles. The other side will have the new SKF PK-300 Pendulum weighting arm drafting system.* (2) Display boards with separator shields and mounting accessories, Permalube nebs and saddles and Bouligny traversing threadboards and traversing mechanisms.

L. O. Crawford, F. R. Beaver, R. C. Page, Sam Walsh, Jack Francis.

Headquarters hotel: Greenville Hotel.

Bowen-Hunter Bobbin Co. 212
East Corinth, Vt.
(See Greenville Textile Supply)

Brainard Steel Division Sharon Steel Co. 477
Warren, Ohio
Steel strapping, Safe-Ty strapping tools, strapping accessories.

R. A. Wolschlag, J. D. Boyer, M. D. Rictor.

Headquarters hotel: Orvin Court.

Browne & Sharpe Mfg. Co. 264
Providence, R. I.
(See Livingston & Haven Inc.)

Bullard Clark Co. 422
(See E. H. Jacobs Mfg. Co.)

Burlap Tubing Manufacturers Inc. 325
Philadelphia, Pa.
(1) Bel-Tex Fit-Rite bias sewn burlap tubing.* (2) Waterproof laminated burlap carpet wraps. (3) Burltex adhesive. (4) Belmont wire ties and automatic twisters.

Samuel Mackler, Thomas D. Cook, Herman L. Poole, C. Paul Shoffner.

Headquarters hotel: Poinsett Hotel.

Burlington Mills 432
Greensboro, N. C.
(See Holt Associates)

Cable Carriers Inc. 364
Greenville, S. C.
A model overhead conveyor will be shown with samples of the following systems: CCS-200—using 5/16" cable links with a load capacity of 80 lbs. per trolley station; CCS-300—using 7/16" cable links with a load capacity of 275 lbs. per trolley station; CCS-400—using 9/16" cable links with a load capacity of 500 lbs. per station; and CCS-600—using 7/8" cable links with a capacity of 1,200 lbs. per station.

Don Zebley, C. F. Wilde Jr., Joe K. Garrison, W. L. Owens.

Cameron & Barkley 275
Greenville, S. C.

Carolina Belting Co. 217
Greenville, S. C.
Accessory equipment including box plate and binder leather, harness straps, check straps, condenser tapes, comb and gill box aprons.

Charles F. Miller, Dean N. Van Dyke, C. T. Allen, Earle W. Sargent, William R. Fox, James E. Hay.

——The Greenville Show

Carolina Brush Co. 309
Charlotte, N. C.
A full line of brushes designed for the textile industry.

J. S. (Jim) Smith, J. C. (Jack) Hawkins.

Headquarters hotel: Holiday Inn.

Carolina Fiberglass Products Co. 335-A,900
Wilson, N. C.
A variety of containers of fiber glass plastics including conditioning boxes, doff boxes, truck boxes, wet finishing boxes, batch containers and shuttle guards.*

R. P. Watson Jr., W. N. Conoley.

Headquarters hotel: TraveLodge Motel.

Carolina Radio Supply Co. 328
Greenville, S. C.

Carolina Supply Co. 230
Greenville, S. C.
Reception booth.

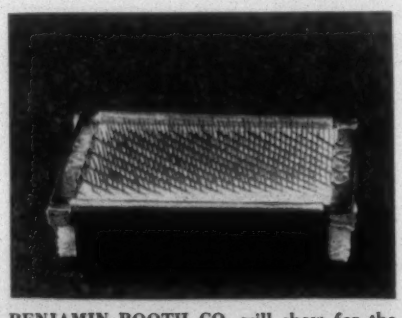
Claiborne Mardre.

A. B. Carter Inc. 124
Gastonia, N. C.
(1) Boyce weavers knotter.* (2) Boyce fisherman's knotter.* (3) Spinning and twister travelers.* (4) Phantom drafting system.*

J. K. Davis, D. E. Phillips, P. L. Piercy, W. T. Horton, B. R. Link, J. R. Richie R. A. Haynes, P. R. Stroup, J. E. Carter, E. Haines Gregg.

Headquarters hotel: Orvin Motel.

*Shown at Atlantic City.



BENJAMIN BOOTH CO. will show for the first time a new line of card flats made by Graf & Co. of Switzerland. The flats are available in five different types including rigid wire with cut point, and split-setting types. The company stresses that each type is made for a particular application and that no one type is the answer to all carding problems.

The Greenville Show——

Cen-Tennial Cotton Gin Co. 824
Columbus, Ga.
(1) The Cen-Tennial opener-cleaner which receives cotton from the feed table and opens and cleans it. Since the unit has a larger storage capacity than delivery capacity, the stock is thoroughly blended while being whirled around in the roll box of the intake side of the opener-cleaner. (2) The Cen-Tennial separator cleaner which is described as a unique condenser and cleaner. The unit is connected to the opener-cleaner in such a way that a suction created by separator fan discharges the stock from the preceding machine. The separator is equipped with a stationary screen, instead of the conventional revolving cage, which prevents any rolling up of the well-opened stock from the opener-cleaner. The large exposed surface of the screen permits the removal of pepper and pin trash through the perforations. (3) The new Cen-Tri-Vac cleaner is being shown for the first time. The machine brushes out the trash instead of trying to beat it out. The trash is removed from the brushes by a vacuum created under the grids by the separator fan.
S. K. Dimon, W. A. Harmon and J. E. Brown.
Headquarters hotel: Flamingo Motel, Taylors, S. C.

Center Chemical Co. 304
Atlanta, Ga.
Floor sealers and maintenance products.
Lou Ruff, Bruce Jones, Nat Legend, Sam Sims.

Chandler Machine Co. 359
Ayer, Mass.
(1) Power operated sample cutting pinking machine. (2) A portable hand-operated sample cutting pinking machine.
R. C. Maxant.

Chavis Textile Sales Co. 115-A
Gastonia, N. C.

A. W. Chesterton 228
Everett, Mass.
(See Schachner Leather & Belting Co.)

Chicago Tramrail Corp. 904
Chicago, Ill.

Clark Door Co. 338
Newark, N. J.
The Prest-O-Matic bi-parting sliding door which is said to do away with the need for complex mechanisms and wiring systems necessary for electric powered doors.
Henry B. Clark Jr., Edward A. Wiegleb, F. H. Trethewey.
Headquarters hotel: Orvin Court.

Clark Equipment Co. 475
Battle Creek, Mich.
(1) The NR4O 38" wide electric-powered narrow aisle lift truck with a 4,000-lb. capacity. The unit, which can operate in 7' aisles, features hand-operated power brakes, power steering, dual operating controls, two-wheel drive and automatic fork lift. (2) The C30 LP gas-powered fork truck of 3,000-lb. capacity which is equipped with a long reach clamp. (3) The C2OP LP gas-powered fork truck of 2,000-lb. capacity which is equipped with pneumatic drive tires and cushion steer rear tires. Directional control and lift-lower control are mounted on the steering column within fingertip reach of the operator. For operation in lint-filled atmospheres a lint screen slips into place over the radiator. (4) Model 40P electric-powered operator-led Powrworker pallet truck of 4,000-lb. capacity. (5) The Clarklift triple-stage upright for extra high stacking. (6) The Baldwin-Clark 5,000-lb. attachment for fork trucks for the in-transit weighing of loads with an accuracy of .2% of the load. Controls for the device, including weight indicator are mounted on the lift truck steering column.
George A. Markell, Glenn A. Christians, Frank Lyne.
Headquarters hotel: Poinsett Hotel.

Clark-Cutler-McDermott 449
Franklin, Mass.
(See Yeomans Textile Machinery Co.)

Clemson College 323-A
Clemson, S. C.

Cleveland Tramrail 115-B
Division Cleveland
Crane & Engineering Co.
Wickliffe, Ohio
(See Engineering Sales Co.)

Clinton Corn Processing Co. 205
Clinton, Iowa
Reception booth.
A. C. Junge, R. C. Rau, C. F. Cline, B. L. Estes, Grady Gilbert, C. B. Looper, C. W. Hite, G. H. Henderson, E. F. Patterson, J. L. Finley.
Headquarters hotel: Poinsett Hotel.

Coats & Clark Inc. 512
Newark, N. J.
Nylon twister travelers and metal insert nylon travelers.
R. H. Wilcox, T. B. Farmer, M. H. Cranford, H. A. Carter.
Headquarters hotel: Wade Hampton Motel.

Cocker Machine & Foundry Co. 836
Gastonia, N. C.
(1) Model AD 601 section beam warper.* (2) Model GH slasher.*
John Cocker III, John Bodansky, Hoyt Cunningham, Orville Davis, Harry Kiser, Jim Etheredge, T. Frank Suggs, E. F. Friday, Howard Scroggs.
Headquarters hotel: Greenville Hotel.

The Colson Corp. 480
Elyria, Ohio
(See Wrenn Bros.)

Cometsa Spindle Co. 908
Vergara, Spain
(Represented by E. B. Rock)
A full line of Cometsa spindles including: (1) Roller bearing spindles for warp and filling.* (2) Ball-bearing spindles with Fafnir sealed bearings, for warp and filling. (3) Twister spindles for industrial yarns.
Fernando Azcargorta, Edward Rock.
Headquarters hotel: University Park Motel.

Continental Diamond Fibre Corp. 461
Newark, Del.
Roving cans, materials handling containers, loom parts, laminated and molded gears and fabricated parts.
H. J. Coffey, H. Moyer, O. Thomas, A. D. Gray, G. W. Von Seth, C. B. Haynes.
Headquarters hotel: Poinsett Hotel.

Continental Tapes 341
Cayce, S. C.
(See General Enterprises)

Corn Products Sales Co. 441
Greenville, S. C.
Reception booth.
A. N. McFarlane, H. Plimpton, Charles Spencer, A. A. Harden, J. T. Seawell, E. W. Beardsley, J. R. Hill, Harmon Harris, Dave Jenkins, T. W. Blackwell, W. R. Joyner, P. A. Donaghy Jr., J. Alden Simpson, G. O. Greene, E. G. King, G. E. Wood, Harry M. Green.

Cotton-McCauley & Co. 828
Pawtucket, R. I.
(1) Cleanguide double apron drafting system operating on a new Saco-Lowell SJ-CG spinning frame using spring weighting and 60° angle roll stands.* (2) Climax ball bearing top rolls to be on display and running in the Cleanguide drafting.* (3) Clean-draft non-lubricating nylon top rolls on display counter.* (4) Whitehead bobbin holders operating on the spinning frame.* (5) The Bijur automatic lubricating system as part of the spinning frame.*
Frank H. Cotton, Raymond L. Mc-

*Shown at Atlantic City.

Cauley, Richard K. Butler, J. Bertram Howarth, Cecil A. McAbee.

Headquarters hotel: Catalina Court.

Crabtree Textile Accessories Inc. 339
Greenville, S. C.

(1) Sintox sintered alumina hard ceramic thread guides.* (2) Tension devices of all kinds including tension gates, disc tensions, etc.* (3) Wire guides and wire shapes of all types in satin or mirror bright hard chrome finish.* (4) High density polyethylene loom products, textile package holders.* (5) Textile bobbins and tubes, including a range of products in heavy duty aluminum alloy and covering wood, paper and plastic bobbins. (6) Pressure lubrication systems: "one shot" and automatic lubrication systems. (7) Pneumatic equipment including cylinders, filters, etc.

G. Arnold Winterburn, Phil Somers, J. Bryan Ashworth.

Headquarters hotel: Poinsett Hotel.

Creamery Package Mfg. Co. 127
Chicago, Ill.

The CP stainless rotary slasher pump in various sizes. The units feature resilient rotors which absorb wear encountered with some abrasive sizings. They are of 316 stainless steel and have field replaceable parts. Timken roller bearings are furnished on all pumps at no extra cost. Massive shafts carry the rotor load with the least possible distortion.

F. S. Brumley, William Harrod, William J. Moore, George Willits, Charles E. Schick.

Crompton & Knowles Corp. 139
Worcester, Mass.

The C-7A dobby loom, 82″ between swords, 25 (20) harness, 15/32 gauge, 4x1 box, automatic bobbin changing and paper indication.* The C-7A was developed to answer the demand for a loom incorporating the basic C-7 features but providing greater width. It is basically a C-7 loom with the necessary refinements to fulfill the needs of a high speed wide loom to weave midweight or lightweight worsted or blended suitings and other fabrics such as upholsteries and draperies. Regular features of the C-7 line incorporated in the new loom are: push-button operation, electric protection, electric operation of the warp stop and center stop, box hangup giveway switch protection, transmitter drive including reversing motion, parallel link binders. Innovations include vacuum filling control and two filling stop motions which contribute to loom production.

A lower silhouette was provided by lowering the arch and top of the dobby. This permits the operator to easily look over the top of the arch and observe adjacent rows of looms. "A" type cross girts and box steel lengthwise girts together with the lowered dobby and arches contribute to the greater frame stability essential to higher loom speeds.

In order to make it applicable for the types of fabrics to be woven in the C-7A, the dobby has been improved as follows: reinforced harness jacks to adequately handle the required loads; cam dobby drive to permit dwell and crossing control to suit the yarns employed; and strengthened base support. Indication of the harnesses and box motion are obtained by the use of a punched pattern mechanism.

Also featured is an improved all-purpose worm driven take-up featuring a take-up roll 8⅛″ in outside diameter as compared with 5″ on some looms. Included in the construction of this take-up are two preset self-aligning self-equalizing pressure rolls. The 63% increase in roll surface is designed to yield maximum performance in the handling of tender yarns and goods with textured surfaces. By the use of a device called the "pick selector unit" proper combinations of four of the eight change gears provided with each loom will allow a fine increment pick range from approximately 8 to 193 p.pi.

A variety of let-offs are available but the display model will feature a Hunt let-off arranged to accommodate a warp beam of 32″ diameter.

Other features of the loom are: a lightweight laybeam, a strengthened box motion, a cam-operated transfer mechanism, a new revoker that functions at high speeds, cone picking, scissors thread cutter, vacuum control and two filling stop motions. These improvements are designed to provide trouble-free loom performance, reduced maintenance, improved quality, lessened operator fatigue and increased work assignments, production and profits.

J. F. Molloy, V. F. Sepavich, John C. Irvin, Raymond A. Sharpe, Lewis Burgess, Henry C. Wingard.

Headquarters hotel: Poinsett Hotel.

Cronland Warp Roll Co. 106-A
Lincolnton, N. C.

(See G. F. League Mfg. Co.)

Cross Sales & Engineering Co. 218
Greensboro, N. C.

Crown Co. 834
New Bremen, Ohio

(See Baker Mfg. Co.)

Curtis & Marble Machine Co. 235
Worcester, Mass.

(1) The SL selvage shear designed to shear all types of filling yarns extending from the cloth selvage on either one or both sides.* (2) M-125 cloth folder for 50″ goods for one yard folds with "one shot" lubricating system and special safety guards.* (3) Portable railway sewing machine for 50″ goods which sews re-inforced seams at the selvages of the goods by means of a variable stitch with a Merrow 60D3B sewing machine head.*

Walter E. Hildick, Walter F. Woodward, Jack Federline, Jack Stanley.

Headquarters hotel: Poinsett Hotel.

——The Greenville Show

Daily News Record 210
New York City

Darnell Corp. 212
Downey, Calif.

(See Greenville Textile Supply)

Dart Union Co. 459
Providence, R. I.

(See Fairbanks Co.)

Davis & Furber Machine Co. 476
Charlotte, N. C.

Napper clothing, card clothing, leather and synthetic rub aprons, and leather and synthetic condenser tapes. Machines making card and napper clothing* and a sample card.*

E. N. Atwood, W. M. Truslow, J. W. Wagoner, Bennie A. Frost.

Headquarters hotel: Greenville Hotel.

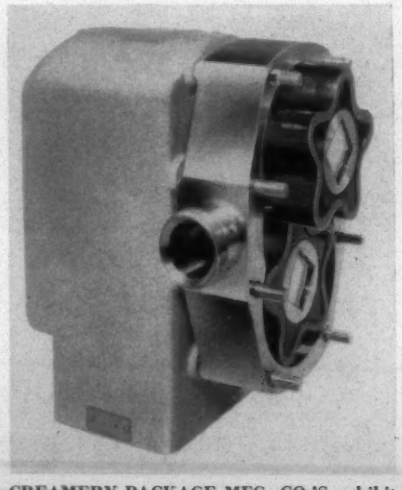
Davison Publishing Co. Lounge
Ridgewood, N. J.

Dayco Textile Products Co. 136
Greenville, S. C.

Dayco cots and aprons; Thorobred loom supplies; slasher rolls.

J. O. Cole, W. L. Morgan, E. L.

*Shown at Atlantic City.

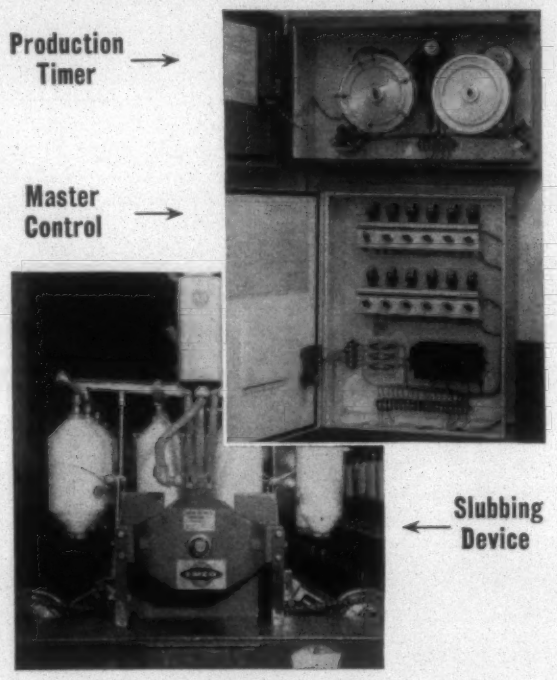


CREAMERY PACKAGE MFG. CO.'S exhibit will feature a CP Stainless Rotary Slasher Pump in operation. The pump is designed to eliminate costly factory reconditioning time. Exclusive resilient rotors absorb wear encountered with some abrasive sizings.

You'll see the latest methods in Power Transmission an

Presented by ELECTRO-MECHANICAL ENGINEERING CO

SLUBBING DEVICES
ELECTRICALLY CONTROLLED
For Any Spinning Or Twister Frame



Production Timer Provides Central Control for Unlimited Yarn Design on One to One Hundred Frames

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Higher Front Roll Speed Means More Production

Individual Chain Timers Are Obsolete

Write for Bulletin or Interview

BOOTH 506

EMCO

ELECTRO-MECHANICAL ENGINEERING COMPANY

CHARLOTTE, N. C.
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GREENVILLE, S. C.
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Modern Farval Centralized Lubricating Systems can drastically cut your production costs in the following ways:

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- SAVES POWER CONSUMPTION
- SAVES BEARINGS
- SAVES LUBRICANT

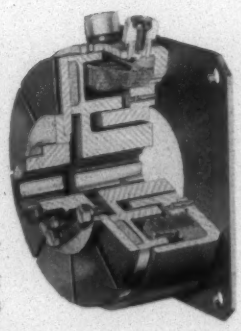
This new Bulletin 26-T contains 20 colorful pages that graphically show the complete Farval line and how these versatile lubricating systems can fit into your production picture.



Farval Division
Eaton Manufacturing Company
3291 East 80th Street
Cleveland 4, Ohio

BOOTH 506

EATON
DYNA-TORQ®
Magnetic-Friction Clutches and Brakes



utilize the simple principle of electro-magnetic engagement of two friction members (field-magnet and armature) to transmit driving or braking torque. Extremely rapid response without backlash or chatter makes Dyna-torQ units ideally suited to a wide range of automatic cycling applications.

A diversified line includes clutches, brakes, clutch-brakes, and clutch-couplings. Sizes: 1½" to 15" in diameter. Easily and quickly installed on new machines or existing equipment.

Manufactured by

EATON MANUFACTURING COMPANY

DYNAMATIC DIVISION • KENOSHA, WISCONSIN

BOOTH 506

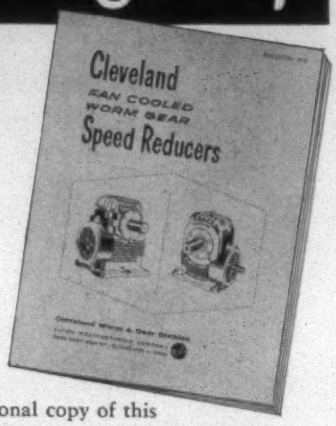
and Control in Booth 506 at the Greenville Show

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Eaton Manufacturing Company
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BOOTH 506

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Complete description and engineering data on the Cleveland Speed Variator.

This unique variable speed drive gives you infinitely variable, stepless speeds up to 9:1 (from ⅓ to 3 times input speed). Precise adjustment gives instant, smooth speed change by manual, automatic or remote control.

Simple construction, compact, quiet running. No belts or complicated linkage.

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CLEVELAND WORM & GEAR DIVISION
Eaton Manufacturing Company
3291 East 80th Street • Cleveland 4, Ohio

BOOTH 506

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BROWNING MANUFACTURING CO. DRIVES
EATON MANUFACTURING CO. DIVISIONS
THE CLEVELAND WORM AND GEAR COMPANY
THE CLEVELAND SPEED VARIATOR
THE FARVAL CORPORATION
DYNAMATIC — DYNA-TORQ

ELECTRO MOTION CORP.

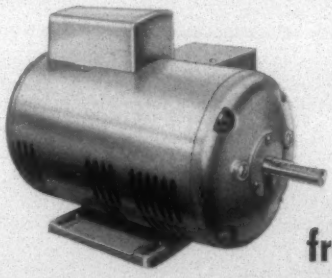
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AJUSTO-SPEDE® DRIVES

Where infinite adjustment and accurate control of speeds are required, Eaton-Dynamatic Ajusto-Spede Drives offer a simple, low-cost solution to the problem — stepless adjustment from zero to full ouput speed, and accurate control of any speed within the speed range. Sizes are ¼, ½, and ¾ horsepower at 1600 RPM; ½, ¾, and 1 horsepower at 3200 RPM.

Manufactured by

EATON MANUFACTURING COMPANY
DYNAMATIC DIVISION • KENOSHA, WISCONSIN

BOOTH 506

The Greenville Show——

Howell, B. A. Glenn, T. W. Meighan, Ira B. Veazey, G. H. Newbern, H. H. Pearson, Claude Dunn, J. T. Edwardo, J. W. Brogden.

Headquarters hotel: Poinsett Hotel.

Dinsmore Mfg. Co. 234
Salem, Mass.
(See Hollister-Moreland Co.)

Dixie Bobbin Co. 432
Barre, Vt.
(See Holt Associates Inc.)

Dixie Bearings Inc. 416
Greenville, S. C.

Ball, roller and thrust bearings pillow blocks and flange units; oil seals, "O" rings and retaining rings; OTC bearing removal tools; and Garlock Teflon bearings for die cast capbar nebs and saddles for spinning, twister and speeder frames.

E. F. Brown, J. L. Lammers Jr., J. L. Disney, J. M. Phelps, H. L. Cox, J. F. Rivers.

Headquarters hotel: Colonial Court Hotel.

Dixon Corp. 850
Bristol, R. I.

(1) Cavalla Roth drafting* incorporating a new fiber control method; 60° roll stands; ball bearing botton steel rolls; and the new C-R top arm with nothing extending below the steel rolls. (2) Tension weighting*—eliminating all weights, levers, stirrups, springs or magnets and combined with a tension meter to accurately measure top roll pressures. The system can be applied to all types of spinning. (3) Dixon cots and aprons—the newest in top roll cot and apron technology incorporating non-lapping and antistatic ingredients, and assured longer life. (4) Two-apron Shaw drafting*—a minimum changeover of seven basic parts to convert standard Shaw drafting to a double apron system, allowing higher drafts. (5) Two-apron ZDR drafting—a conversion for Z spinning from a single to a double zone system for drafting, allowing drafts for all cotton staples as well as synthetic staples up to 3½".

Other drafting systems such as Casablancas TW Super will be shown, along with changeover component parts. Two spinning frames will be in full operation.

Robert Rulon Miller, Warner H. Tabor, Vito Pierannunzi, Merrill C. Kenna, Ed Hett, Virgil Collette, Henry Hurt and Albert Cavallaro.

*Shown at Atlantic City.

The Joseph Dixon Crucible Co. 332
Jersey City, N. J.

Dixon Wash-A-Way cloth marking pencils No. 780 and Empire chalk.

Gray McChesney.

Headquarters hotel: Poinsett Hotel.

Dockery Mfg. Co. 311
Rockingham, N. C.

Dodge Mfg. Corp. 403
Mishawaka, Ind.

A broad line of mechanical power transmission equipment will be shown including: Flexidyne dry fluid drives and couplings; Para-flex flexible cushion couplings; Torque-Arm speed reducers; Taper-Lock sprockets and chain; Taper-Lock shaft couplings; Dyna-V and standard V-belt drives; individual card drives with Flexidyne; Dodge pilloy blocks and flange bearings with Timken tapered roller bearings, spherical roller bearings, ball bearings, sleeve bearings and hinged-cap bearings; variable pitch sheaves; and variable pitch sheaves with Flexidyne.

Paul Keb, Reynolds Barker, Jack D. Stroobandt, Fred J. Ebeling, Ralph Hanes.

Headquarters hotel: Cabana Inn.

George P. Dorris Co. 429
St. Louis, Mo.
(See Ira M. Valentine)

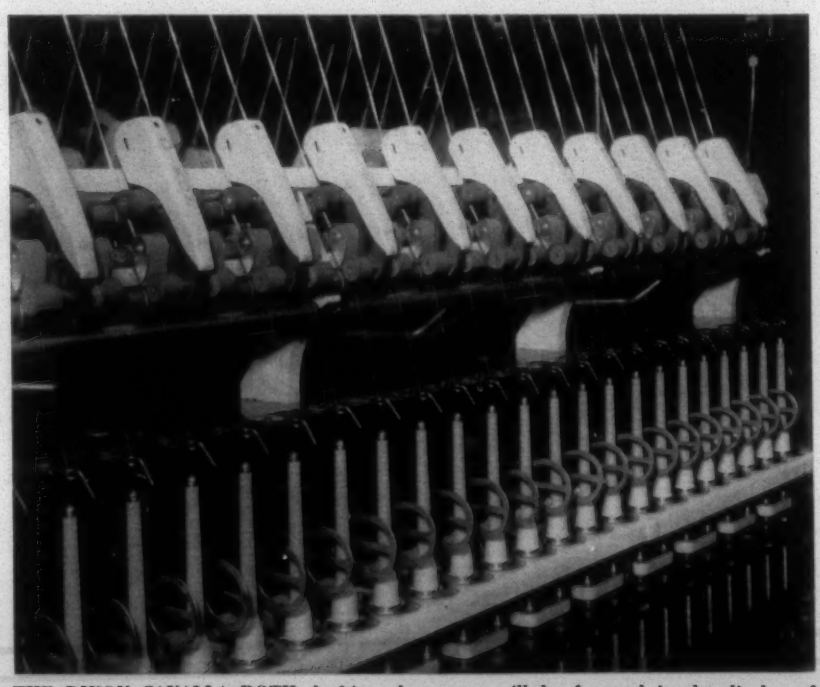
Draper Corp. 132
Hopedale, Mass.

(1) A 46" shuttleless loom operating at slow speeds to permit close examination of its working parts and mechanisms.* (2) A shuttleless loom operating at 250 p.p.m. weaving a sports denim fabric, a 3-harness 2/1 L.H. twill weave.*

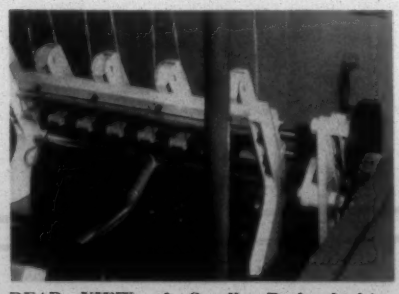
The shuttleless loom frame (front, back and top girt as well as the breast beam assemblies) consists of structural steel angle sections bolted to cast iron ends, facilitating easy replacement.

The harness motion features several innovations including treadles designed and mounted so as to pivot from the front of the loom, providing for quick and easy adjustments. Identical harness cams are used in all harnesses, for all shades, with three different warp openings possible with the same harness cams.

A totally-enclosed clock spring top is equipped with a gear and worm arrangement to permit adjustment of all springs simultaneously with a socket wrench from the outside of the housing. Pull-down of the harness frames is accomplished through a system of harness rods and harness



THE DIXON CAVALLA ROTH drafting changeover will be featured in the display of the Dixon Corp. The changeover is designed to eliminate oiling on all rolls, top and bottom. A new apron positioning and tensioning device is claimed to assure 10% stronger yarn.



REAR VIEW of Cavalla Roth drafting changeover showing its cleanliness and simplicity.

hooks, and this, combined with the clock top, provides a smooth positive harness action.

Cloth rolls can be doffed simply with little effort and without stopping the loom. The cloth roll is friction driven by metallized wind-up rolls which derive their motion from the take-up roll. The cloth is diverted by guide rolls to provide for a 24" diameter roll of cloth.

A switch mounted on the left hand cloth roll stand, stops the loom automatically before a roll of cloth builds up in diameter to the extent that it could cause damage.

The shuttleless loom is also equipped with a mechanical center fork motion. This center fork motion can be set to stop the loom whenever a broken pick occurs on a "single try" setting or it can be set to act on a "two try" setting which is on the second pick break.

The loom is powered by a transmitter type drive which incorporates an electric motor, brake and clutch, in one housing. To stop the loom automatically, signalling devices are provided. An indicator light, set on top of the right hand harness sheave bracket, shows when the loom is stopped.

A constant tension let-off is provided which permits no appreciable change in average warp tension from full to empty beam. Once the initial settings are made, little or no adjustment is required to maintain the proper yarn tension.

The tape motion, or the system by which the filling is drawn into and laid in the shed, consists of flat steel tapes, right and left hand, each equipped with a filling carrier. Filling is laid in cycles of two picks (one pick to a shield). These picks resemble a hairpin with the open end at the left hand side and the bend at the right hand side. This produces a fabric which is smooth with a uniform selvage at the right hand side and a presentable selvage at the left.

A selvage binder and a separate selvage supply contribute to keeping the left hand selvage tight and to locking the end of the pick. This device operates completely independent of the loom's harness motion. In effect, it is a full-time leno and can be set to lock every filling pick or every two picks.

Lubrication of the shuttleless loom can be handled automatically if desired. Many of the major mechanisms are completely enclosed. Sealed antifriction bearings are also used. In other areas, impregnated wood bushings and rubber torsional bushings, requiring no lubrication, are used.

The elimination of shuttles, bobbins, pickers, picker sticks and virtually all leather parts, permit substantial savings in part costs. All mechanisms on the loom are interconnected, with positively controlled timing of filling insertion, filling cutting, harness crossing, etc.

Most settings originate from a graduated hand wheel or "timing wheel," as it is sometimes called. Thus, a greater degree of stability in settings can be maintained which enables substantial reductions in fixing and maintenance costs.

A large display of repair parts, mechanisms and weaving accessories will point up many new advances. Among these will be a new link parallel assembly featuring a floating Pitman Pin Design. This mechanism overcomes much of the binding conditions encountered.

Other mechanisms include a No. 14 shuttle check, a new center fork bracket which includes in its design a clock-type center fork prong spring. A foot-operated let-off pallet release used with the automatic Bartlett let-off provides for easier adjustments and settings.

Durant Mfg. Co. **903**
Milwaukee, Wisc.
(See M. R. Snyder Co.)

Eaton Mfg. Co. **506**
Cleveland Worm & Gear Division
Cleveland, Ohio
(See Electro Motion Corp.)

Eclipse Machine Division **212**
Bendix Aviation Corp.
Elmira, N. Y.
(See Greenville Textile Supply Co.)

Economy Textiles Inc. **905**
Gastonia, N. C.
(See Edward Rudnick Inc.)

Edda International Corp. **129**
New York City
(1) The Titan warp tying-in machine.* (2) Excelsior reed cleaning and polishing equipment.* (3) Maxbo shuttleless loom featuring speeds from 320 to 400 p.p.m.* In the Maxbo loom the shuttle is replaced by an air nozzle from which a concentrated jet of air is ejected to blow the filling through the shed. This is designed to reduce the stress on the warp threads and to permit picking speeds of between 320 and 400 p.p.m., depending on the width and type of cloth. The yarn is fed from two large-capacity cheeses. Vibration is greatly reduced by the elimination of the mechanical picking motion. Thinner reed dents are possible because of the absence of the shuttle. This increases their lateral resilience, enabling knots to pass freely without entangling. The warp beam regulator operates automatically and does not require setting. The loom is available with electrically or mechanically operated warp detector. (4) Loom supplies.*

B. Gudjonsson, H. A. Nagel, R. J. Farr, E. L. Pullen.

Headquarters hotel: Poinsett Hotel.

——The Greenville Show

Electro-Mechanical **506**
Engineering Co. and
Electro-Motion Corp.
Charlotte, N. C.
(1) Dyna-torQ electrically controlled brakes and clutches and Eddy-Current Adjusto-Spede drives.* (2) Cleveland speed variators.* (3) Cleveland worm and gear speed reducers.* (4) Centralized lubrication systems.* (5) Electrically controlled slubbing devices.

J. G. Swinney, Frank Cureton, Russell E. Bray, Jack Hopkins, Jim Adair, George Tasse, L. O. Witzenburg, Doug Leader.

Headquarters hotels: Wade Hampton Motel and Poinsett Hotel.

Engineered Plastics Inc. **846**
Gibsonville, N. C.

Engineering Sales Co. **115-B**
Charlotte, N. C.
(1) Escaveyor, a self-loading continuous vertical conveyor. The unit moves 8 to 10 loads per minute with the continuity of a belt conveyor. It is operated by four endless chains, running over a complicated set of rollers and carrying cross slats that pull the load aboard as they form a level platform that carries the load to the top. (2) Cleveland Tramrail. (3) Nutting trucks. (4) Magcoa dockboards and Grip-Strut grating.

Equipto Division **305**
Aurora Equipment Co.
Aurora, Ill.
Complete line of steel shelving, parts bins, drawer units, work benches and shop equipment.

Paul Streit, Robert L. Logan.

Esso Standard **472**
Division of Humble Oil & Refining Co.
Charlotte, N. C.
A variety of lubricants including Spinesso spindle oil, Nebula EP multipurpose grease, Millcot anti-spatter oil, Telura spindle and twister ring oil, Bayrol white synthetic fiber lubrication oil, Epic textile machine lubricants, Varsol machinery and fabric cleaner, Uniflow motor oil, and Essolube HDX heavy duty motor oil.

J. S. Barnes, U. G. Crook, B. B.

*Shown at Atlantic City.

Official Registrars

AS IN PAST YEARS, THE BULLETIN will again serve as official registrars for the Southern Textile Exposition. If we can be of service to you, please don't hesitate to call on us.

The Greenville Show——

Capehart, J. J. Deegan, D. A. Knee, R. J. McCarley Jr., W. W. Gregg, G. W. Pressly Jr., W .T. Huff, J. E. Cornwell, J. B. Mayer, D. Sawyer, W. G. Smith, G. P. Lambright, F. L. Snipes, R. C. Heyward Jr.

Exact Weight Scale Co. 208
Columbus, Ohio
Scales for Micronaire testing; yarn count testing; measuring and weighing dyestuffs; weighing and controlling cones, cheese and bobbins for accurate length; lap weighing; and for laboratory and quality control work.
Jose M. Orta.

Excel Inc. 233
Lincolnton, N. C.
Materials handling equipment including a doff truck for use around automatic spoolers, winders and rotoconers.
N. W. Eurey, Paul Eurey, E. E. Eurey, C. W. Eurey.
Headquarters hotel: Greenville Hotel.

Extremultus Inc. 126
Long Island City, N..Y.
Nylon polymer transmission belts for use on cotton and wool cards, roving frames, twisters and other textile drives.* The belts are said to offer up to four times the load-carrying capacity and up to three times the coefficient of friction of conventional belts.
Kenneth Tsunoda, George L. Pellicer, C. Guy Rivers.

The Fairbanks Co. 459
New York City
A variety of rigid and swivel casters, dollies, trucks, wheels, valves and pipe fittings.
J. L. Ragland, J. A. Bailey, L. L. Bogle, J. T. Chandler, A. T. Giles, J. R. Shattles.
Headquarters hotel: Holiday Inn.

*Shown at Atlantic City.



THIS MODEL 4104A SHADOGRAPH scale for Micronaire testing will be featured in the exhibit of The Exact Weight Scale Co. of Columbus, Ohio.

Fairbanks, Morse & Co. 102
Atlanta, Ga.

Faultless Caster Corp. 473
Evansville, Ind.
(1) The new thread-guard caster designed to prevent clogging by threads. (2) A complete line of casters and wheels of plastic, rubber and steel.
Harvey R. Watters, T. J. Bromeling, George T. McLeod, Jack Couch, Wales Burdette.
Headquarters hotel: Poinsett Hotel.

Federal Pacific Electric Co. 108
Chamblee, Ga.

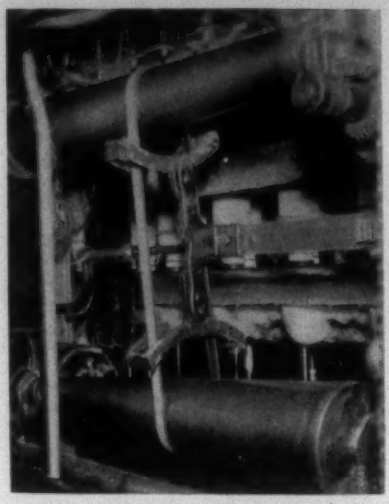
The Felters Co. 349
Boston 11, Mass.

Fenwal Inc. 426
Ashland, Mass.
(See W. K. Hile Co.)

Finnell System Inc. 110
Elkhart, Ind.
A variety of floor maintenance units including: 218G LP gas-powered self-propelled combination floor Scrubber-Vac; Mark 26-battery-powered Scrubber-Vac combination machine; 418G LP gas-powered floor Scrubber-Vac; 110 divided weight floor machine with tank; 818 motor weighted floor machine with solution tank, 821 motor weighted floor machine with solution tank; 10CS vacuum (wet and dry) stainless steel container; 712 convertible floor machine and Kote floor finish dispenser; 36AS vacuum (wet and dry-detachable motor unit for portable blowing and vacuuming) stainless steel container.
Herb Dickson, James E. Bates, James W. Linn, V. L. Gustason, Orin Davis.
Headquarters hotel: Poinsett Hotel.

Fisher Mfg. Co. 314
Hartwell, Ga.
Warp handling equipment featuring units at winders, spoolers and rotoconers.
J. Glenn Fisher, Robert M. Matthews, James N. Fisher, C. A. Matthews, Neal Houston, J. S. Davis, J. C. Long.
Headquarters hotel: Ottaray Hotel.

Fletcher Industries 807
Cheltenham, Pa.
(1) The new high-speed all-purpose elastic web loom which can be converted from elastic to non-elastic in a few hours. The 5′ loom, designed to produce heavy government webbings, will be operating at speeds up to 300 p.p.m. depending on the weight of the material. The loom is said to produce heavier webbing without the bulk of the average machine needed for the purpose. Because of its rigid construction it is possible for the weaver to produce a much greater variety of narrow fabrics and webbings on the same loom with a minimum of mechanical changes. Individual harness frame guides reduce the harness load for the entire loom. The heavier cam shaft and larger diameter cams provide increased and smoother lift at higher speeds. (2) The Power-Fab loom, a 5′ high-speed all-purpose elastic web loom, without the changeover feature.* (3) The Duplex doubler twister* equipped with new special feed roll attachments for making novelty yarns of glass, nylon and other synthetics and natural fibers. The 20-spindle unit has a 5″ ring, up to 10″ traverse and a bobbin capacity of 2½ lbs. of filament yarns or 1½ lbs. of spun yarn. It produces bottle bobbins, double tapered pirns and straight traverse bobbins. (4) Jumbo Duplex 22-spindle doubler twister featuring a 5 lb. package.* The unit has a 6″″ ring, 9 and 10″ traverse on the bottle bobbin or 10½″ traverse on double tapered tubes. Gauge is 9″ center to center. The frame is of cast iron and steel with large roller bearing spindles and 2½″ whorl for good belt contact.
Edward T. Taws, Edward T. Taws Jr., Frederick S. Claghorn, Eldon Stowell, Bus Roessell, Charles Mancke.



NYLON POLYMER POWER TRANSMISSION belts for use on cotton and wool cards, roving frames, twisters and other textile drives will be featured by Extremultus Inc. in Booth 126. The 1-inch wide Extremultus belt on this roving frame cone drive replaces conventional 1¾-inch and 2-inch wide belts and is said to achieve a much greater sensitivity of coning action.

Foster Machine Co. 827
Westfield, Mass.
(Representing Lindly & Co.)
The Series 1000 Ultra yarn inspector consists of a detecting head over

which the yarn is run and a compact electronic control unit which can be mounted remotely or attached to either of the legs. A hard chrome plated hold-down bar is provided with each head as well as a reed holder. Provision is made for wiring the yarn inspector to the warper controls so that it is in operation only when the warper is running, thereby eliminating the false counts that could occur while the yarn is being repaired.

A number of new features have been incorporated in the unit. The control unit has been completely transistorized. This is said to make for greater stability, longer component life, less maintenance, greater compactness and less power consumption. A new optical system is said to make possible better electronic performance and to eliminate the need for the usual bothersome light and deflector cover. The redesigned optical system employed in the new model employs an objective lens and a pick-up lens unit in front of the phototube to exclude stray light and minimize electronic noise caused by tension irregularities. (2) The Lindly Electrotense tensions. (3) The Dyna-Micro-Gage,* a photoelectric device designed for the continuous monitoring of spun and filament yarns, and for checking the average denier of filament yarns, and for checking the average denier of filament yarns, and the uniformity of spun yarns.

Edward C. Connor, Howard Lindemann, V. Mateka, C. P. Elgin, P. J. Farmer, E. P. Dodge, E. H. Ely, H. Hornbuckle, G. W. Mallory, C. H. Amidon.

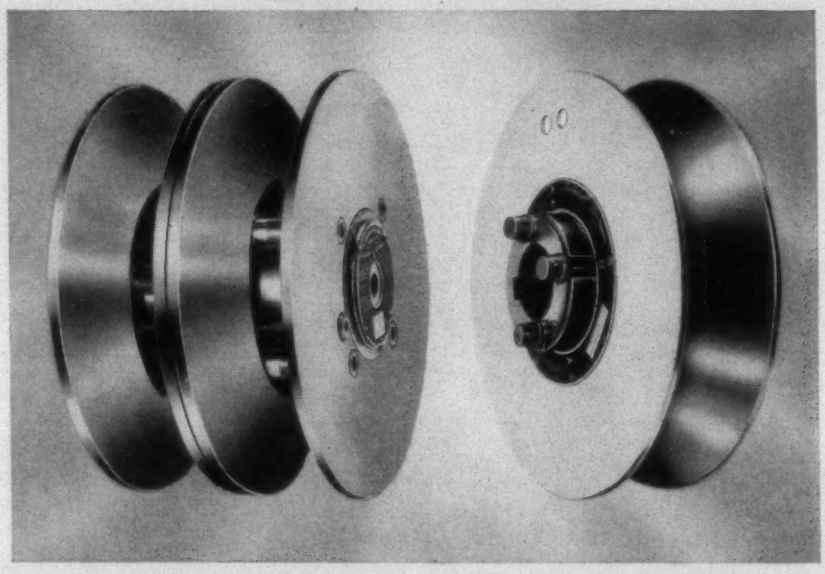
Headquarters hotel: Poinsett Hotel.

The Foxboro Co. 405
Foxboro, Mass.

(1) Model C-HCR CycleLog controller shown in system for dye beck control in which the entire dyeing cycle can be carried out automatically. The instrument adds automatic rinsing to the traditional CycleLog control of the dyeing schedule, thus providing controlled rate of temperature rise, dyeing temperature and rinse time. Also shown as part of the automatic dyeing system will be a Model 45 indicating temperature transmitter which measures temperatures at the dye kettle and transmits them to a remotely located controller. (2) A demonstration of Foxboro stretch control will feature the use of Type 16A pneumatic speed transmitters, a ratio controller and a pneumatic current controller to adjust motor speed so that the desired per cent stretch can be maintained.* (3) Fast response to tenter dryer temperature changes will be demonstrated by a Foxboro Dynalog* instrument used with fine-wire thermocouples. (4) Model 44B relative humidity transmit-

*Shown at Atlantic City.

NOW AP OFFERS THE MOST COMPLETE LINE OF WIDE-RANGE ADJUSTABLE-SPEED DRIVES FROM STOCK



Single groove drives in "Q", "R", and "W" cross-section transmit up to 20 hp.
Double groove drives in "R" cross-section transmit up to 30 hp.

Order from 7 sizes and 4 models of AP Wide-Range Adjustable-Speed Drives. Single groove drives in "Q", "R", and "W" belt cross-section width transmit up to 20 hp. And double-groove drives in "R" belt cross-section widths deliver up to 30 hp.

Previously made on special order for textile machinery manufacturers, AP 2-R Groove Adjustable-Speed Drives are now being made for Stock. Intended for use on machines where a heavy duty, dependable, economical adjustable-speed drive is needed, they are ideal for replacement of existing overloaded drives—and new installations—where increased capacities are required.

AP Wide-Range Adjustable-Speed Drives are the economical, compact and positive form of speed control. Furnishing quiet, accurate adjustment (up to 2:1), they insure proper drive speed for all applications.

FEATURES:

1 Exclusive double-tapered hub locks flanges securely—permits stepless, accurate speed adjustment. Small or large adjustments are precise and permanent, no freezing.

2 Precisely machined and dynamically balanced, all sheaves are strong, quiet running, long-lasting and trouble-free.

3 Simultaneously moving flanges insure correct belt alignment at all times.

4 Companion Sheaves feature Q-D Bushings. Easily installed or removed, they grip shaft firmly.

Your AP *Distributor will tell you why more mill men are specifying* AP *Adjustable-Speed Drives. See him! His experience and engineering know-how will prove that it pays for you to standardize on* AP.

THE AMERICAN PULLEY COMPANY
4200 WISSAHICKON AVENUE • PHILADELPHIA 29, PA.
A division of VAN NORMAN INDUSTRIES INC.

2652.

The Greenville Show——

ter for remote measurement or control. (5) A concentration controller for acid and caustic dilution, scouring baths and hypochlorite bleaching. (6) Ph electrodes. (7) ORP electrodes. (8) Conductivity cells.

T. A. Jones, E. R. Tims, S. C. Alexander, W. G. Digby, R. M. Glass, W. H. Ridley.

Frontier Electronics 903-A
Greenville, S. C.
(1) A production recording system which records loom production at a central console, individually or by group, and distributes the data by weaver, fixer, style and shift. Production data is accumulated in the counters by daily and weekly totals and is used for production and payroll computations. (2) M-M-M production control system, which consists of individual loom attachments, counts the number of loom stops per loom, and the reason for the stops: either warp, filling or mechanical. (3) A new electric car for transportation or light materials handling.

Martin F. O'Brien, Rudolph V. Hall.

Fuller Co. 264
Catasaugua, Pa.
(See Livingston & Haven)

Garland Mfg. Co. 106
Saco, Me.
Plastic loom pickers, plastic lug straps, plastic sweepsticks, other plastic loom accessories. Rawhide loom pickers and other leather loom accessories.

Harry P. Garland II, Frederick L. O'Neil, Frederick L. O'Neil Jr., Wilson F. Hurley, Henry Harrison, Richard Hurley.

Gaston County Dyeing Machine Co. 802
Stanley, N. C.
Auxiliary dyehouse equipment—batch cans, buckets, pails, dippers, pumps, valves, etc.

Walter Newcomb, George Hacker, Gordon Hacker, Ray Craig, Yates Craig, Alfred Rhyne, Robert Angel.

Headquarters hotel: Poinsett Hotel.

The Gates Rubber Co. 443
Denver, Colo.

P. C. Gault Co. 354
Greenville, S. C.
(1) Gai-Tronics transistorized paging equipment. (2) Automatic dial telephone system.

P. C. Gault, James E. Marshall, Herman Lord Jr.

*Shown at Atlantic City.

General Box Co. 308
Meridian, Miss.
Hinge corner pallet bin.

C. E. Keene, R. H. Goehe, M. F. Mallory, G. H. Voelker.

Headquarters hotel: Poinsett Hotel.

General Electric Co. 116
Schenectady, N. Y.
(1) 1¼ h.p. upright "C" configuration Polydyne with a double reduction reducer. Output speed range 142 to 20.4 r.p.m. (2) Kinatrol speed variator. (3) Parmatic speed variator. (4) Lamp display.

F. C. Alexander, J. D. Byrne, C. D. Beck, J. H. Fowler, M. D. Harris, E. E. Light, R. R. Parker, E. H. Reilley, W. L. Richbourg, F. F. Smith, T. R. White, J. E. Wyche, K. G. Morris.

General Enterprises Inc. 341
Greeenville, S. C.
(1) Molybdenum disulfide oils and greases. (2) Masking tape, electrical tape and packaging tapes.

George Fant Jr., J. J. Silverstein, Charles G. Hinkle.

Headquarters hotel: Wade Hampton Motel.

Georgia-Carolina Oil Co. 113
Macon, Ga.
Textile lubricants.

H. E. Coggin, B. N. Coggin, G. W. Dobbins.

Headquarters hotel: Orvin Court.

Gilman Paint & Varnish Co. 446
Chattanooga, Tenn.
(See Olney Paint Co.)

Globe Co. 115-B
Chicago, Ill.
(See Engineering Sales Co.)

Globe Gear Co. 903
Philadelphia, Pa.
(See M. R. Snyder Co.)

Glover Wood Turning Co. 432
West Millbury, Mass.
(See Holt Associates Inc.)

Golden's Foundry & Machine Co. 219
Columbus, Ga.
Power transmission equipment, ball bearing applications, grey iron castings.

J. L. Grantham, Joe A. Asselin, Jack W. Kibby, R. K. Ballard.

Goodyear Tire & Rubber Co. 834
Akron, Ohio
(See Baker Mfg. Co.)

Graton & Knight Co. 507
Worcester, Mass.
Premium quality textile leathers including: straight and curved Hairon check straps; two-fold Hairitan endless check straps; Boxmaster and Boxking binder leather; Pickmaster pickers; Research and Heart Oak flat leather belting; Nycor combination leather and plastic belt; Revo all synthetic belt; Nycor Texbelt for lickerin and doffer; leather condenser aprons and tapes; round belting; cements; Sprazon belt dressing.

J. G. Henrikson, E. G. Sinclair, W. M. Wills.

Great American Industries 106-A
Bedford, Va.
(See G. F. League Mfg. Co.)

Greenville Textile Supply Co. 212
Greenville, S. C.
(Representing Pioneer Heddle & Reed Co., Bowen-Hunter Bobbin Co., Lestershire Spool & Mfg. Co., Eclipse Machine, Boston Gear Works, W. T. Lane & Bros., and Darnell Corp. Ltd.)

W. L. Brigham, John T. Mason, T. M. Bailey, Hugh Z. Graham, E. W. Ware Jr., R. E. Stephens, J. E. Poston, Rudolph Craig, R. B. Dorman Jr., W. H. Jordan, C. G. Price, Marion Maynard, Clyde Hathcock.

Headquarters hotel: Howard Johnson Motel.

Ira L. Griffin & Sons 501
Charlotte, N. C.

Gulf Oil Corp. 211
Houston, Tex.
Gulfspin spindle oil, Gulf Harmony and Gulfcrown grease.

O. K. Weatherwax, J. H. Hooten, J. E. Coleman, H. B. Minick Jr., S. E. Owen Jr., C. T. Timmons, A. J. Borders, J. A. Lanier, R. G. Burkhalter Jr.

Headquarters hotel: Poinsett Hotel.

Hatcher Sales Co. 467
Atlanta, Ga.

Hayes Industries Inc. 433
Jackson, Mich.
Two nylon tricot beams—30" and 21"; a 30" nylon section beam; and a 38" cotton section beam.

R. D. Richards, W. D. Sharp, J. E. Prius.

Headquarters hotel: Poinsett Hotel.

Heany Industrial Ceramic Corp. 514
New Haven, Conn.
Heanium thread guides and tension devices*

A. O. Pieper, R. L. Carroll.

Herr Mfg. Co. 267
Buffalo, N. Y.
"M" type Herr conical rings and holders complete with Herr flyers.*

Hyatt B. Atwood, Robert M. Leach, William W. Woodward, James McLean, William K. Anderson Jr.

W. K. Hile Co. 426
Charlotte, N. C.
(1) Fenwal electronic temperature controllers and indicators. (2) Level controls by Instruments Inc. (3) Hotwatt electric elements and memory ovens.
W. K. Hile, C. P. Maloney, G. M. Lupo, K. T. Ball, R. E. Gallegher, R. S. Lee.
Headquarters hotel: Poinsett Hotel.

Hill Mfg. Co. 358
Atlanta, Ga.
Floor finish, penetrating seal, Lemon-Cide disinfectant, Lemon-Kleen all-purpose cleaner, Kleen-It loom cleaner.
E. E. Margoles, J. R. Matthews, J. Hunter, H. Smith, L. Horner, K. Weathers, L. Gibson, William Budd.
Headquarters hotel: Greenville Hotel.

The Hilliard Corp. 903
Elmira, N. Y.
(See M. R. Snyder Co.)

Hollister-Moreland Co. 234
Spartanburg, S. C.
(1) Style M automatic oil feeding Merrow machines including the recently developed Style M-4D-45 toe seaming machine. (2) Totally-enclosed motors with E-Z Flo tables. (3) Tek Matic thread trimming machine. (4) Dinsmore No. 11BV-25 multiple stitch railway with Style 60-D3B Merrow head which gives multiple stitch on the selvage.
R. B. Moreland, O. S. Bachelor, J. B. Moreland, Lane C. Burris, Robert M. Jenkins, Jack Washburn, W. M. Baker, Bob Pettit.
Headquarters hotel: Catalina Motor Court.

Holt Associates Inc. 432
Greensboro, N. C.
(Representing B. Snowiss Fur Co., Norris Bros., Glover Wood Turning Co., Burlington Ribbons Mills, Dixie Bobbin Co.)
Shuttle fur, picker sticks, sweep-sticks, skewers, loom bobbins, wood warp bobbins, nylon spinning and twister tape, and roving bobbins.
James G. Skinner, David R. Sellers, John P. Norman, Walter H. Huff, Charles H. Crumpton, W. Wayne West. West.
Headquarters hotel: Wade Hampton Motel.

Hotwatt Inc. 426
Danvers, Mass.
(See W. K. Hile Co.)

Howard Bros. Mfg. Co. 252
Worcester, Mass.

The Howe Scale Co. 448
Atlanta, Ga.

The Hubinger Co. 501
Keokuk, Iowa
(Represented by Ira L. Griffin)
OK brand Pearl starch, OK brand Pearl starch No. 173, OK brand thin boiling starches, and OK waxy film XLT.
Roy Underwood, Ira L. Griffin, Garvis Orr, Joe Myers, Carl Merritt.
Headquarters hotel: Poinsett Hotel.

James Hunter Inc. 465
Mauldin, S. C.
(1) Multi-Tuft bale blender* for opening, cleaning and blending direct from bale. Full bales of cotton or other fibers are placed on the bale blender and untouched until completely blended with all other bales in the same lot. (2) New cotton cleaner. (3) Self-contained condenser. (4) Automatic weighing belt blending conveyor for use with existing conventional type blending hoppers (5) Hunter psychrometer* and electronic eequipment. (6) Fiber Locker needle felting machine.*
James Hunter, Richard Hunter, William F. Leineweber Jr., A. V. Moody, Harry Creegan, Ray Plumb, L. V. Neese, H. A. Brown Jr., W. B. Estes, Larry Girard, Earl Connelly, D. B. Powers.

Hurley & Harrison Inc. 227
Greeenville, S. C.
(1) Micro Grind needle point card clothing.* (2) Nylon core belting. (3) Plastic pickers, lugs and sweep sticks. (4) Pneumatic roll pickers. (5) Spools and bobbins. (6) Transmission belts.
W. F. Hurley, Henry W. Harrison, R. C. Hurley.

Hyatt Bearings Division 104
General Motors Corp.
Harrison, N. J.
A complete line of anti-friction bearings.*
G. B. Baxley, E. P. O'Neill, E. Maurushat, C. C. Wardell.
Headquarters hotel: Poinsett Hotel.

Hyster Co. 480
Danville, Ill.
(See Wrenn Bros.)

Ideal Industries Inc. 239
Bessemer City, N. C.
Ideal 2-delivery drawing frame equipped with 18x42" coilers, with operating speeds of 750 f.p.m.
Joe R. Whitehurst, Albert S. Roebuck, C. E. Conner, Frank B. McDonald, Sherwood Livingston, Walter L. Whitley, James Rayfield, Blair Hoyle.
Headquarters hotel: University Park Motel.

ILG Electric 241
Ventilating Co.
Chicago, Ill.
(Represented by Chet Adams)
(1) TA305 Tubeaxial fan. (2) PF365 propeller fan. (3) 16433T textile type unit heater. (4) Util-A-Set. (5) IF-12 industrial fan. (6) Power-roof ventilator.
C. Z. Adams, J. J. Friedler Jr., W. T. Foreman, F. H. Bigelow, R. F. Donavan.
Headquarters hotel: Poinsett Hotel.

Industrial Coatings Inc. 214
Greenville, S. C.
Reception booth.
H. E. Russell.

Industrial Dryer Corp. 466
Stamford, Conn.
"H-W" yarn conditioner for twist setting and regain, arranged to pre-heat, condition, dry and exhaust.*
P. H. Friend, F. W. Caesar.

Instruments Inc. 426
Tulsa, Okla.
(1) Radiation-type Gagetron control, first gamma ray instrument used by industry for liquid and solids level control. Flexibility is achieved by a choice of internal or external gamma source locations plus local or remote recording and weatherproof or explosion proof designs. (2) Pneumatic Type F/C transmitter, a diaphragm liquid level indicator. (3) Capacitance Type Electr-O-Probe level control. Designed with a highly sensitive oscillator, the unit easily detects capacitance changes as low as .5 mmfd. (4) Mic-O-Float with mercury switch actuator, a float type of level control. (5) The Mic-O-Flex positive displacement type float which is especially suited for use on calibrated tanks. (6) Conductance Type Leviltronic relay, a simple level switch designed to control or indicate the level of conductive fluids.
W. K. Hile, C. P. Maloney, G. M. Lupo.
Headquarters hotel: Poinsett Hotel.

Inter-Con-Tex Import Co. 432
New York City
(1) Timmer Simplex bobbin stripper. (2) Gee Wee plastic pickers. (3) Imported bobbins and quills.
B. Snowiss, Isidore Bergner, David R. Sellars, J. G. Skinner, John P. Norman, Walter H. Huff, Charles H. Crumpton, Wallace W. West, Charles M. Dunn Jr.
Headquarters hotel: Wade Hampton Motel.

International Business 460
Machines Corp.
New York City
(1) The 1401 data processing system. (2) The 357 data collection system. (3) 632 electronic typing calculator. (4) Standard executive and decimal tabulating electric typewriters.
J. H. Temple.

*Shown at Atlantic City.

The Greenville Show——

International Correspondence Schools 336
Scranton, Pa.
Plans for industrial training tailored to suit individual plant needs.

U. E. Akins, Ray Gagnon, W. F. Eckard, George McClenaghan, Ed Green, Boyce Lee, C. T. Carpenter, Woodrow Hills, Bill Watkins, Jim Zrakas, C. C. Rearden, Ben Sligh, Roy Flenniken.

Headquarters hotel: Cleveland Hotel, Spartanburg.

Jacobs Bros. 334
Clinton, S. C.

E. H. Jacobs Mfg. Co. 422
Charlotte, N. C.
A complete line of loom supplies made of canvas, rubber, plastic, wood and leather.

W. R. Muller, C. W. Cain Jr., L. L. Froneberger Jr., Ralph M. Briggs Jr., F. W. Beaver, Doyle H. Stansell, S. Ben Henderson.

Jamesbury Corp. 483
Worcester, Mass.

Jenkins Bros. 453
New York City
Bronze, iron, cast steel and stainless steel valves.

E. C. Barrett, W. A. Snellgrove, E. L. Dean, S. L. Hubbs.

Headquarters hotel: Poinsett Hotel.

Jenkins Metal Shops 838
Gastonia, N. C.
M. H. Creighton.

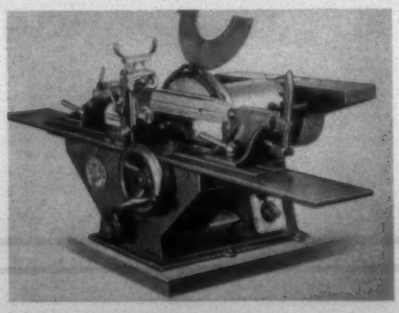
Headquarters hotel. Holiday Inn.

The Johnson Corp. 437
Three Rivers, Mich.
(1) A complete line of Type S self-supporting rotary pressure joints with assembly plates and syphon elbows.* The joints are said to be packless, self-lubricating and self-adjusting. They are suitable for pressures up to 250 lbs. (2) Type L-JSP rod supported rotary pressure joints with assembly plates and syphon elbows.* The joints are used to admit steam or fluids under pressure into processing equipment. (3) Small operating models with Type SBP self-supporting and Type L-JSP pressure joints.* (4) Solenoid operated valves* for the automatic or remote flow control of liquids and steam up to 400° F. and of high viscosity liquids. (5) Instant steam water heaters* for instantaneous boosting of storage heating of water, oil or other liquids. (6) Compressed air separators and aftercoolers for dirt and moisture-free air.*

Ralph W. Gotschall, James E. Dal Ponte.

Headquarters hotel: Poinsett Hotel.

*Shown at Atlantic City.



SHUTTLE TRUING MACHINE — Lenkotex Co. will have on display this shuttle truing machine by Harnisch, West Germainy.

Johnson's Wax 307
Racine, Wisc.
(1) Forward all-purpose cleaner which has a high alkaline cleaning power but is sillicate-buffered for safety. (2) Traffic-Cote penetrating sealer. (3) Red Label Gym finish. (4) Step-Ahead polymer finish. (5) Super Shur-Tred slip-retardant buffable polymer finish. (6) Wax-strip floor cleaner and wax remover.

J. F. Nieman.

Kanegafuchi Machine Co. 905
Osaka, Japan
(See Edward S. Rudnick)

The Keever Starch Co. 407
Greenville, S. C.
Reception booth.

Charles C. Switzer, James F. Kurtz, Robert L. High, F. M. Wallace, R. H. Cates, R. F. Guill, E. T. Hackworth, C. B. Phillips, S. S. Rice, T. S. Richbourg.

Headquarters hotel: Poinsett Hotel and Greenville Hotel.

Kenyon, Wm. & Son Inc. 508
Perth Amboy, N. J.

Keystone Lubricating Co. 402
Philadephia, Pa.
(1) No. 88 X light cartridged multi-purpose lubricant for anti-friction and plain bearings. (2) 122 C 5X loom gear grease applied with special portable lubricator. (3) No. 49 high-temperature lubricant for dryers, air compressors and vacuum pumps. (4) RT (relief type) fitting which replaces relief plugs in motor and pillow block bearings and prevents overlubrication.

W. F. Boger, Charles W. Little, R. M. Goss, N. W. Benjamin.

Kidde Textile Machinery Corp. 478
Bloomfield, N. J.
(1) 168″ tricot knitter. (2) Slasher. (3) Model 158G fiber glass warper.

W. J. Behr Jr., H. W. Ruddick, Dan McCoy, D. O. Shepherd.

Headquarters hotel: Colonial Court Motel.

Kluttz Rings Inc. 110-A
Gastonia, N. C.
Display of spinning rings and accessories. Mechanical demonstration of wear factors presented to ring surfaces by Lubricase treatment.

John H. Foard, Hugh K. Smith, Thomas H. Watson, W. Paul Taylor, David Yoder.

Lambeth Rope Corp. 222
Kings Mountain, N. C.
Cotton and nylon spindle tapes and narrow fabrics. Tape binding and cutting machines.

J. P. O'Leary, Frank Burke, Oliver Landis, H. B. Askew.

W. T. Lane Bros. 212
Poughkeepsie, N. Y.

LaSalle Steel Co. 352
Chicago, Ill.
(1) New alloy steel bars designed to eliminate heat treating of parts: e.t.d. 150 with 150,000 p.s.i. tensile strength with a hardness of Rc 32-36; and e.t.d. 180 with 180,000 p.s.i. tensile strength and Rc 38-43. (2) Stressproof heavy draft cold finished bar steel featuring high-strength, free machinability, good wearability and minimum warpage. (3) Fatigue-Proof steel bars with higher tensile properties and excellent machinability.

C. W. Bimba, G. D. Boyer, R. J. Burkhardt, W. E. Schneider, W. V. Trifiro.

Headquarters hotel: Poinsett Hotel.

G. F. League Mfg. Co. 106-A
Greenville, S. C.
A wide variety of loom accessories.

G. Frank League, G. Frank League Jr., B. M. Cronland, P. J. Hovis, C. R. Metz.

Leesona Corp. 810
Providence, R. I.

Lenkotex Co. 120
New York City
(1) Spintex roller bearing spindles for spinning and twisting.* (2) Mann spinning rings and twister rings.* (3) Saccardo paper tubes for spinning and twisting and paper bobbins for roving frames.* (4) Harnisch temple rolls, temple rings and parts for looms.* (5) Harnisch shuttle truing machine. (6) Mayer Touro-Strob stroboscopic speed measuring and process observation instrument. (7) Lenkotex plastic pin strips.* (8) Plastic loom pickers.*

V. Lindner, G. Kalb.

Lestershire Spool Division 212
National Vulcanized Fibre Co.
Johnson City, N. Y.

(Represented by Greenville Textile Supply Co.)

Lestershire spools and bobbins and the Lestershire Jack spool with new Lock-Eze construction.*

G. M. Hutchinson, L. J. Phelps.

Headquarters hotel: Greenville Hotel.

Lincoln Engineering Co. 510
St. Louis, Mo.

(1) Micro-Measure—a miniaturized lubricant injector system for automatic lubrication of production machinery which pre-measures and injects fluid lubricants to millionths of an ounce.* (2) Automatic loom lubrication.* (3) Dyna-Spray hydraulic paint spraying system* designed to cut overspray and bounce-back and to apply coatings more evenly. (4) Airline quick disconnect couplings* designed to provide the fastest and most efficient method for coupling and uncoupling air hoses. (5) Air compressors.* (6) Airline lubricators, filters and oilers.*

R. E. Crean, R. Moss, K. Boyer, C. Lane, J. Vlasak, J. O'Donnell.

Headquarters hotel: Spanish Motor Court.

Lindly & Co. 827
Mineola, N. Y.

(See Foster Machine Co.)

H. F. Livermore Corp. 108-A
Boston, Mass.

(1) Dobby head parts and assemblies.* (2) Vibrator combinations.* (3) Lay mounted thread cutter.* (4) Filling holder cutter.* (5) Picking motion parts for Crompton & Knowles looms.* (6) Paralleling and picking motion parts for Draper looms.* (7) Doff-Rite Feeler.*

Chester Hammond, H. W. Black, L. G. Urquhart, J. G. Phillips, T. H. McLeod, W. B. Whitehurst, J. Dalton, G. L. Davis, W. T. Jordan, E. W. Fanning, J. H. Bell, Anthony Patelis Jr., J. M. Stevens.

Livingston & Haven Inc. 264
Charleston, S. C.

(1) Long lap control system for a 40" Kitson picker. The Long system eliminates yard-to-yard variations by the application of immediate and constant equal pressure through air cylinders directly to each end of the lap pin. (2) Pneumatic clutch for Kitson pickers which provides immediate start-up and let-off, eliminates waste at the end of laps, eliminates wear on knock-off and drive gears and eliminates strain on the entire calender section. (3) Hydraulic equipment. (4) Rotary compresser. (5) Oil Dyne hydraulic power unit for pressures to 5,000 p.s.i. (6) Westinghouse air brake and pneumatic devices.

M. D. Haven, A. C. Flint, J. E. Moorefield, W. A. Wallace, W. P. Durst.

Headquarters hotel: Poinsett Hotel.

Livingstone Coating Corp. 201
Charlotte, N. C.

(1) Teflon coated equipment. (2) Aerosol dispensed fluorocarbon release lubricant. (3) Fluidized bed coating process demonstration. (4) Sample fiber glass tank.

Stan Livingstone, A. B. Small.

Headquarters hotel: Wade Hampton Motel.

Lockwood Greene Engineers 220-A
Spartanburg, S. C.

Reception booth.

H. M. Rogers, J. C. Hipp, L. S. Booth, M. J. O'Brien, T. O. Ott, J. I. Simpson, J. Z. Robinette, M. V. Gelders, M. L. Boggs, C. G. Richardson.

Lowell Industries Inc. 108-A
Boston, Mass.

M. B. Products 227
Detroit, Mich.

(See Hurley & Harrison)

Machinery 506
Electrification Inc.
Northboro, Mass.

(See Electro Motion Corp.)

——The Greenville Show

Magnesium Co. 115-B
of America.
Hialeah, Fla.

(See Engineering Sales Co.)

C. Eugen Maier 128
Stuttgart, Germany

(See Watson & Desmond Inc.)

Manton-Gaulin Mfg. Co. 818
Everett, Mass.

(1) Model 400 TK6-3BS textile homogenizer with automatic pressure controller for homogenizing dyes, coatings, sizes, etc. (2) A laboratory homogenizer. (3) Model 2A Colloid mill.

D. G. Colony, G. W. Eldridge, J. J. Dwyer, D. Van Roosen, L. H. Rees, C. Howard Leveritt, John E. R. Hayes, Lawson Hayes, E. Hart.

Headquarters hotel: Poinsett Hotel.

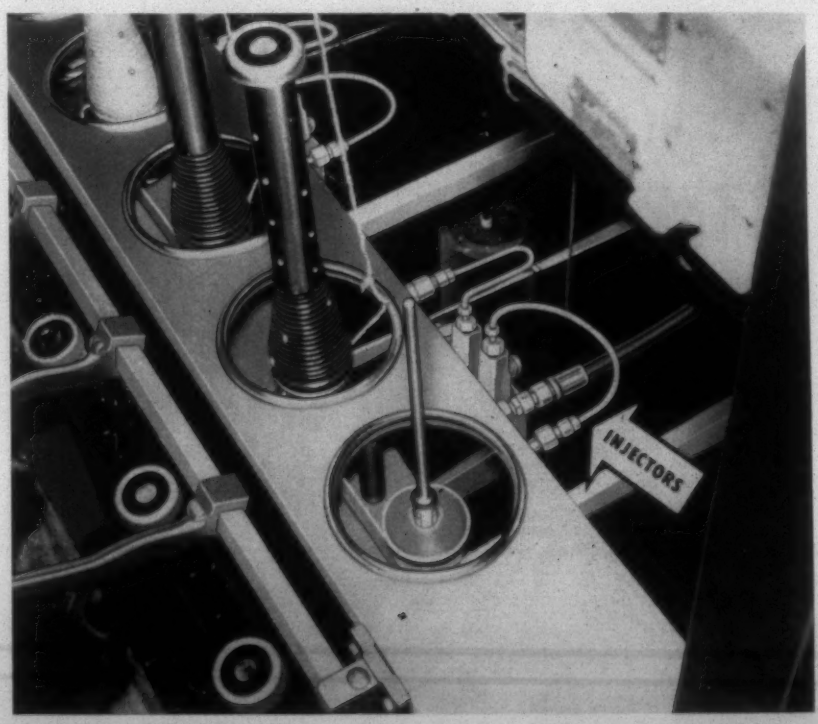
Marsh Stencil Machine Co. 229
Belleville, Ill.

(1) Marsh stencil cutting machines, electric and hand-operated. (2) Electric Dial-Taper and Twin-Taper machines for dispensing moistened gummed tape. (3) Marking supplies.

E. G. (Jack) Krause.

Headquarters hotel: Orvin Motor Court.

*Shown at Atlantic City.



LINCOLN ENGINEERING CO. will feature this Micro-Measure miniaturized lubricant injector system for automatic ring lubrication in its display at Booth 510. The system insures constant application of pure lubricant to any bearing.

The Greenville Show——

Marshall & Williams Corp. 249
Greenville, S. C.
(1) New tenter designed for cloth room handling problems, including the straightening of the weft. (2) Representative line of repair parts for all makes of tentering equipment. (3) Edge guide controls. (4) Complete line of tenter clips.
John C. Nash, Fred H. Land, Albert J. Marshall, Edward E. Ford, William C. Brown, Fred Hyatt, Carl W. Schmidt Jr., Charles Keep.

Master Electric Co. 144
Dayton, Ohio
(See Reliance Electric Co.)

Mathis Water Treating Co. 310
Anderson, S. C.
(1) Corrosion meter. (2) Controlled volume chemical feed pumps. (3) Water testing equipment. (4) Technical data on water treatment.
James C. Mathis, Dr. George F. Meenaghan.

Matrix Controls Co. 901
Somerville, N. J.

McDonough Power Equipment Co. 246
McDonough, Ga.
McDonough universal card coiler which is designed to put maximum sliver in the can at minimum cost.
John L. Sinback, Walker Phillips, W. A. Wallace.

Meadows Mfg. Co. 812
Atlanta, Ga.
(1) Meadows Jumbo twister — 10″ gauge, 8″ ring, 12″ traverse—equipped with Meadows' new single-end, single-spindle, completely automatic stop motion. (2) Meadows Speedmaster tire cord twister equipped with double line bottom rolls, 7″ gauge, 5½″ ring. (3) New Loboy twister—25″ wide, 5½″ gauge, 4″ ring, 15″ traverse. (4) Miscellaneous spinning and twisting accessories and conversion parts.
E. D. Meadows, J. R. Caldwell, J. C. Martin, A. F. Gandy, B. J. Wright, P. N. Scaraboro, W. S. Coleman.
Headquarters hotel: Poinsett Hotel.

Mechanical Felt & Textiles 273
Weehawken, N. J.

Medley Mfg. Co. 907
Columbus, Ga.
(Representing Societe Alsacienne de Construction Mecaniques)
(1) Two Model ER-SACM high-speed drawing frames* designed to operate at 650 f.p.m. on carded stock and 500 f.p.m. on combed stock. The units each have two heads operating at very high speeds. A new patented drafting system is composed of four fluted bottom rollers and four top rollers providing two-zone drafting: (a) a pre-drafting between the third and fourth roller, which can be set from 1 to 2; and (b) one main drafting between first and second rollers which can be set from 4 to 8 with a maximum difference of 1% between the two consecutive drafting ranges. The unit features a large diameter delivery roller—60 mm. Production on the units is said to be equal to that of conventional six-delivery frames. (2) The SACM Perl wool comb.*
L. H. Morrison, Robert Shelton, John Berry.

*Shown at Atlantic City.

Merrow Machine Co. 234
Hartford, Conn.
(See Hollister-Moreland Co.)

Metlon Corp. 271
New York City
Metlon non-tarnishing metallic yarn.
Arthur C. Brucks, Hayden C. Cobb Jr., Robert H. Fleming.
Headquarters hotel: Spanish Motel.

Mettler Instrument Corp. 302
Princeton, N. J.
(1) A new yarn balance based on the grain system rather than the metric system. It is designed to permit mills using the grain system to use a balance reading directly in grains, cotton yarn numbers, denier and tex unit. (2) Precision scales with grain calibrations as well as standard precision scales having metric calibrations.* (3) Multi-purpose balances.*
Neal Cooper, Robert Moeller.
Headquarters hotel: Catalina Motel.

Minnesota Mining & Mfg. Co. 845
St. Paul, Minn.
(1) The 3M-Matic textile splicing machine. The unit splices material with heat-activated tape. It can be regulated to handle any fabric width and thickness. It is mounted on 4 swivel casters to permit easy mobility. (2) Scotch-Lag, a resilient friction surface for covering loom rolls and other rolls where surface friction plays a major role. (3) A variety of tapes for lane marking, label protecting, sealing, etc. (4) Safety-Walk non-slip surfacing.
G. F. Pyle, John H. Mellon, H. F. Groth, R. W. Fagen, F. T. Baltz.
Headquarters hotel: TraveLodge Motel.

Minnesota Paints Inc. 326
Atlanta, Ga.
A full line of floor sealers including a polyurethane floor sealer and finish.
Carl Morgan, Don D. Wyatt.

Harley Mitcham & Co. 329
Gastonia, N. C.
Gears, studs, bearings, brackets and stands.
R. W. Bailey, Don O'Hair, Charles G. Stover, Jack Styers, H. C. Grant, Lillie M. Andrews, Edith M. Stroupe, Alice Mitcham.

Mitchell-Bissell Co. 430
Trenton, N. J.
Chromium plated wire, guides, porcelain guides and ceramic guides.
John R. Mitchell, F. Fuetterer, John P. Mueller.
Headquarters hotel: Wade Hampton Motel.

Modern Textiles 121
New York City

Moffatt Bearings Co. 265
Philadelphia, Pa.
Ball bearings, roller bearings, special textile units, oil seals, retaining rings and bearing lubricants.
J. L. Blackwell, J. M. Milford, W. B. Osborne, S. D. Zeanah, J. Dean, R. Womble, Don Duncan, R. M. Johnston, H .W. McCard, O. S. Livingston, D. G. Hornbaker, George Sheppard.
Headquarters hotel: Poinsett Hotel.

Monroe Calculating Machine Co. 343
Orange, N. J.
(1) Monrobot IX electronic textile billing computor. (2) Synchro Monroe punched cards S-101 verifier and tabulator. (3) Monromatic full automatic calculators—Models 8N and 88N. (4) Monroe President accounting machines for receivables, payables and payroll. (5) Monroe 10-key and full keyboard adding machines.
L. A. Dumas, Jake Downing, B. T. Burry, W. Hobgood, E. S. Cabaniss Jr., S. P. Greer.

Morton Salt Co. 509
Chicago, Ill.
(1) All-new Morton Model E-P polyester brinemaker with plastic constructed Fluitron. (2) Various grades of salt.
J. M. Culp, A. C. Dewey, E. R. Ravenel, J. B. Neill, H. H. Jackson, N. W. Birchler Jr.
Headquarters hotel: Poinsett Hotel.

Moto-Truc Co. 834
Cleveland, Ohio
(See Baker Mfg. Co.)

Mount Hope Machinery Co. 114
Taunton, Mass.
A movie describing the company's weft straightening equipment including the Skew Liner.*
John Robertson Jr., S. A. Moffitt.
Headquarters hotel: TraveLodge Motel.

T. J. Murphy Fur Co. 223
Lewiston, Me.
(See Batson Mfg. Co.)

National Cash Register Co. 365
Dayton, Ohio

National Plastics Inc. 449
Knoxville, Tenn.
(See Yeomans Textile Machinery Co.)

National Ring Traveler Co. 213
Pawtucket, R. I.
Ring travelers.*
Norman A. Jerome, L. E. Taylor, H. B. Askew, T. H. Ballard, Frank S. Beacham, Charles L. Fitts.
Headquarters hotel: Poinsett Hotel.

National Starch & Chemical Co. 455
New York City
(1) Kofilm sizing which is said to feature lower gelatinization point, resistance to thinning and superior non-congealing properties. Its wide range of viscosities eliminates the need for special cooking equipment, homogenizers and chemical thinning agents.* (2) Resyn 3600 designed for use as a textile saturant or as a binder for non-woven fabrics.
J. F. Fitzgerald, W. H. Stone, D. Lassiter, F. Gibbons, R. O'Brien, H. Smith, H. Olsen, G. Lanciault, E. Maslanka.
Headquarters hotels: Greenville Hotel and Poinsett Hotel.

National Vulcanized Fibre Co. 832
Wilmington, Del.
(See also Lestershire Spool Division)
(1) Kennett materials handling receptables: roving cans, boxes, trays and floor trucks.* (2) Kennett Unilevel truck.*
E. B. Burnley, G. M. Hutchinson, L. J. Phelps, G. M. Lang, J. C. Davis, D. E. Williams Jr., E. J. Crocker.
Headquarters hotel: Poinsett Hotel.

New Departure Division General Motors Corp. 146
Bristol, Conn.
Spindles, tension pulleys, shears, pick balls, let-off boxes, tube drive belt take-up pulleys, rotary unions and spindle belt idlers.
R. E. Merrill, R. E. Honeycutt, E. H. Case, R. D. Brouwer, C. T. Bragdon, H. E. Smith, A. C. Lormore, A. Curtis Jr., T. H. Adams.
Headquarters hotel: Poinsett Hotel.

New England Paper Tube Co. 128
Pawtucket, R. I.
(See Watson & Desmond)

New York & New Jersey Lubricant Co. 109
New York City

——The Greenville Show

A complete line of various grades of Non-Fluid oil.
I. L. Hall, Fred W. Phillips, A. M. Cowan, R. F. Bagwell, J. A. Sorrells Jr., R. N. Snipes, F. W. Winecoff.

Nilfisk of America Inc. 320
Greenville, S. C.
(1) Model G73 heavy-duty industrial suction cleaner with three motors. (2) Model G72 suction cleaner with two motors. ((3) Model G71 commercial cleaner. (4) Model BMA2 floor polishers. (5) Accessories for cleaning looms, spinning frames, card rooms, overhead beams, etc.
Erling W. Henningsen.

Roy Noble Co. 223
New Bedford, Mass.
(See Batson Mfg. Co.)

Norris Bros. 432
Greenville, S. C.
(See Holt Associates Inc.)

Nutting Truck & Caster Co. 115-B
Fairbault, Minn.
(See Engineering Sales Co.)

O-M Spinning Machine Mfg. Co. 905
Osaka, Japan
(See Edward S. Rudnick)

Odell Mill Supply Co. 212
Greensboro, N. C.
John R. Foster, Dallas C. Neese, George Batchelor, Leon Jones, Weldon Fields.

Oil-Dyne Inc. 264
Chicago, Ill.
(See Livingston & Haven Inc.)

Olney Paint Co. 446
Spartanburg, S. C.
(Exhibiting with Gilman Paint & Varnish Co.)
Paints, varnishes and lacquers.
R. B. Olney, W. P. Dobson, J. M. Isom, C. H. Dodson, L. C. Teeters.
Headquarters hotel: Greenville Hotel.

Ore-Lube Co. 341
New York City
(See General Enterprises Inc.)

J. C. Paddock Co. 442
Spartanburg, S. C.
(1) Collapsible cloth skid. (2) Floating bottom creel truck. (3) Fibre boxes.
Sam E. Mabry, Lawrence E. Corn, Robert H. Williams.

*Shown at Atlantic City.

See Y'All Booth 113



Holt Coggin, Sales Manager



Newt Coggin, S. C. Representative



Bill Dobbins, N. C. Representative

GEORGIA-CAROLINA OIL COMPANY
P. O. Box 101 Phone SH 2-1428
MACON, GEORGIA

The Greenville Show——

Parks-Cramer Co. 502
Fitchburg, Mass.
A complete line of traveling cleaner equipment, both blowing and vacuum, including: SpinSaVac end collection and SpinSaCreel; and the Certified Climate systems for humidification and cooling.

Maynard Ford, C. D. Lee Jr., W. W. Hewitt, E. H. Harding, W. J. Buck, J. F. Crooks, W. B. Granger, J. Nesmith, T. F. Rollins, L. R. Sibley, C. E. Ware, W. B. Walker.

M. H. Parks Co. 227
Winchendon, Mass.
(See Hurley & Harrison Inc.)

The Patterson-Kelley Co. 360
East Stroudsburg, Pa.
(1) Transparent plastic working model of complete modern hot water heating system for process water with special emphasis on waste heat reclamation. (2) A scale-free gas-fired storage water heater. (3) Roto-Screen centrifugal waste water screening device.

James J. Coleman, Joseph N. Peters, Nicholas Ermolovich, T. C. Heyward.

Payson-Harris-Reed Corp. 838
Chicago, Ill.
(See Jenkins Metal Shops)

Penick & Ford Ltd. 427
Atlanta, Ga.
Starches and starch derivatives from corn as applied to warp sizing and finishing.*

O. H. Tousey, D. P. O'Connor, P. G. Wear, G. M. Anderson, J. R. Heard, J. P. Holland, J. H. Almand, G. C. Henry, W. J. Kirby, T. H. Nelson, D. K. Smith, J. R. Poer.

Headquarters hotel: Poinsett Hotel.

George H. Pennell Co. 110-B
Greenville, S. C.
(1) A demonstration of Truco diamond drilling equipment drilling through reinforced concrete at a speed better than 2″ per minute. (2) Ramset powder actuated tools for fastening into steel and concrete.

George H. Pennell, Charles L. Garrett, Jerry L. Blackerby, R. S. (Dick) McKinley.

*Shown at Atlantic City.

Official Registrars

AS IN PAST YEARS, THE BULLETIN will again serve as official registrars for the Southern Textile Exposition. If we can be of service to you, please don't hesitate to call on us.

Perfecting Service Co. 409
Charlotte, N. C.
(1) A new rotary union used on revolving drums or cylinders used in wet processing, dyeing, bleaching and finishing. (2) The Unitrap bucket type steam trap with dual valve requiring no adjustments. (3) The Vari-Pitch roving frame builder which produces a new profile and heavier bobbin. The builder produces a convex profile bobbin that permits high volume package and at the same time allows for high tension winding without increasing overruns. It consists of a variable pitch, single groove, helical builder screw. Actuating follower pins in the builder jaws control the shortening of the successive layers as they are wound on the bobbin. The new builder mechanism bolts into the same position as that occupied by the constant lead builder and fits all U. S. make roving frames. It does not interfere with normal operation and will not require any special attention from the operator. Also, it does not require replacing present flyers. (4) The Jet Stripper which is capable of stripping eight bobbins simultaneously at a rate of 200 y.p.m. An air regulator permits the setting of air pressure to give the desired stripping speed to various hanks of roving. (5) Vari-Tension winding regulator which dictates the winding tension that can be tolerated to produce a heavier package to prevent tension breaks.

A. J. DeMeyer, Conrad Bookout and William G. Renner.

Permacel 335
New Brunswick, N. J.
(1) Permacel 720 slasher tape — a pressure sensitive crepe paper tape with non-staining adhesive for use in cotton mills—also usable as a general utility tape. (2) 02 double faced paper tape for splicing and starting rolls. (3) A variety of splicing tapes including cloth tapes with thermoplastic adhesive and paper tubes. (4) Epoxy adhesives for mounting junction boxes to concrete, metal or wood surfaces and for mounting fixtures of all types. (5) Epoxy coating for the protection of equipment, buildings, etc. (6) Vinyl tapes for wire splicing, wrapping and aisle marking. (7) Strapping tapes and dispensers.

George A. Fizgerald, John E. Schuler, Robert S. Bradford, John W. Griffin.

The Perolin Co. 361
New York City.

S. A. Picanol 839
Metiers Automatiques
Ypres, Belgium

Piedmont Machine Shop Inc. 322
Gastonia, N. C.
(1) New steel rolls and repair services for pickers, waste machines, cards, drawing, combers, lap machines, roving frames, spinning frames, twister frames and pin drafters. (2) New gears of hardened steel, Celeron and cast iron. (3) Hardened gear studs. (4) Cast iron picker bearings. (5) Picker lap pins. (6) Drawing spoons.

Forrest J. Campbell, Harry Ferguson, J. L. Blalock.

Pioneer Heddle & Reed Co. 212
Atlanta, Ga.
(Represented by Greenville Textile Supply Co.)

(1) Duraflex reeds. (2) Draw-Rite frames and heddles. (3) Pitchband reeds. (4) Conventional frames and heddles. (5) Accessories.

Mark W. Mayes, Merle C. Borden, L. Woodward Brown, Charles B. Elliott Jr., Arthur Nuttall Jr., Raymond J. Payne, Glee B. Thompson, E. T. (Buddy) Young Jr.

Headquarters hotel: Greenville Hotel.

Pneumafil Corp. 118
Charlotte, N. C.
(1) Pneumafil vacuum end collectors —the latest C-12 units for superior suction cleaning of spinning frames and collection of broken ends.* (2) Pneumastop roving frame stop motion combined with all the benefits of air cleaning.* The display will show how each strand of yarn is cleaned and conditioned to allow better running work on both roving and spinning frames. (3) Electrofil which stops the roving frame instantly when a creel break occurs, leaving a tail for piecing up.*

C .R. Harris, J. W. Barr, M. E. Herndon, G. E. Archer, W .W. Lloyd, D. J. Thorp, G. C. Fryer.

Poe Hardware & Supply Co. 516
Greenville, S. C.
(Representing Rockwell Mfg. Co., Brown & Sharpe Mfg. Co. and Minnesota Mining & Mfg. Co.)

(1) Rockwell power tools including: 11″ metal lathe—5′ bed model; 17″ drill press, single-spindle floor model; 6″ tool grinder; 2½″ belt grinder; 280 radial drill press; deluxe saw-jointer combination; and 10″ band saw. (2) Brown & Sharpe tools and instruments including: micrometers, gages, calipers, vernier calipers, dividers, magnicators, dial indicators, ground flat stock, rules, etc. (3) Sheet, belt and disc types coated abrasives and polishing wheels from Minnesota Mining & Mfg.

Crawford Poe, Carter Poe, W. T. Henderson, J. J. Swan, Furman Massey, Herman Moore, Harry Graham, Jim Hawkins, Weldon Childress, Joe Long, Hugh Davis, Bill Moore, Otis Vinson, Warren Sherman, John Selvage, Charles Harrop, Bruce Loring, Richard Fessler.

Power Brushes Inc. 324
Toledo, Ohio

Powers Regulator Co. 355
Skokie, Ill.
(1) Series 200 temperature regulator which pneumatically controls air and liquid temperatures in a variety of processes. The unit incorporates a linkage design with captive screw principle which prevents linkage connections from being jarred loose but permits easy reversing of linkages. A control index knob is provided for adjustment. (2) Flowrite V-port valve, a premium quality diaphragm valve. Air or water-operated, it is used to control the flow of hot or cold water and steam. Its design includes a completely enclosed Powerstroke housing with molded synthetic diaphragm. Powers type 590 Teflon asbestos packing reduces maintenance and prolongs valve life. (3) No. II regulator, a self-actuating instrument which automatically controls the temperature of a fluid without using external power. It is particularly suited for high pressure steam and liquid applications. (4) Series 100 time cycle regulator for processes where the temperature or pressure is to be maintained or changed during a given period of time. The regulator can be set to give the exact time schedule desired.

Ed Foss, Bill Arbuckle, Churchill Carter, Benny Vehorn, Charles Atkinson, Jack Slattery, Bill List, Arthur Carlson.

Precision Gear Division 409
Perfecting Service Co.
Charlotte, N. C.
(See Perfecting Service Co.)

Proctor & Schwartz Inc. 503
Philadelphia, Pa.
The new No. 729B blending feed designed to automatically and accurately weigh and proportion various baled stocks into a process. Two or more of these units may be arranged with a transverse floor apron upon which successive weighings of the different fibers are dumped, making an accurately-proportioned, continuous "sandwich" of stocks. This arrangement provides a complete, simple, cost-saving blending unit when used with a picker and condenser.

J. P. Christ, D. D. Cunningham, A. C. Dailey, L. M. Christianson, E. W. Gehrung, C. W. Schwartz IV.

Progressive Engineering Inc. 128, 906
Rockland Mass.

The Pure Oil Co. 105
Chicago, Ill.
A complete line of samples of Pure multi-purpose lubricants and Poco Rollex lubricants.

W. D. Cawley, W. J. Derksen, D. W. Freeman, C. D. Walthall, J. M. Cooper, W. M. Elam, R. G. Morrison, J. A. Williamson.

Headquarters hotel: Greenville Hotel.

Puritan Chemical Co. 418
Atlanta, Ga.
Maintenance products including floor finishes and industrial detergents.

W. H. Frey, Edwin P. Collins, Howard P. Hartley, Harry S. Collinson, H. M. Boniske.

Headquarters hotel: Calhoun Towers.

Radio Corp. of America 347
Camden, N. J.

Ramset Fastening System 110-B
Cleveland, Ohio
(See George H. Pennell Co.)

The Raymond Corp. 458
Greene, N. Y.
(1) Raymond narrow aisle electric fork lift truck with three-stage mast. (2) Walkie stacker. (3) Hydraulic hand pallet truck.

William L. Peck, Richard Manning, W. M. (Mack) Anderson.

Headquarters hotel: Poinsett Hotel.

Reeves Pulley Co. 144, 903
Columbus, Ind.
(See Reliance Electric & Engineering Co.)

Reiners & Fuerst 128
M. Gladbach, Germany
(See Watson & Desmond Inc.)

Reliance Electric & Engineering Co. 144, 903
Cleveland, Ohio
(1) Model 1200-T Vari-Spin drive which consists of a Reliance lint-proof textile motor mounted on an adjustable case and driving an adjustable-pitch pulley arrangement that permits infinite adjustable speed settings within a 2:1 speed range while the unit is running. A minimum-height pivoting motor base and a new pulley disc assembly design permit the drive to fit close to the driven frame. It can be mounted to the right or left. The Vari-Spin pulley is of a three-part design: two discs with an accurately calibrated spring which automatically maintains belt tension throughout the speed range. The belt-tension spring and cartridge are permanently assembled as a one-piece, maintenance-free package.

(2) Super T V*S Drive which features control cabinet size reductions of up to 35% over comparable existing packaged drive units. It is available in ratings of 1 to 350 h.p. The unit can be used as a multi-motor or sectional range drive or as a single or multi-motor slasher drive. Direct attachment of the drive motor to the machine section it powers facilitates installation and eliminates the mechanical problems inherent to line shaft drives. Timed rates of acceleration and deceleration provide "soft" starts and controlled stops to eliminate web breakage.

(3) Reliance lint-proof a.c. motor. (4) Master right-angle gearmotor. (5) Reeves Motodrive adjustable-speed drive. (6) Reliance Duty Master a.c. motor. (7) Master Speedranger adjustable-speed drive. (8) Reliance card frame motor. (9) Reliance V*S Jr. adjustable speed drive. (10) Reliance factory renewal parts for motors and controls.

E. G. Orahood, J. G. King, J. H. Chambers, S. W. Smith, J. R. Cowan, B. Stinogel, C. D. Wright, M. G. Hare, F. W. Leitner, A. W. Fairer, J. W. Jordan, W. C. Prettyman, R. O. Baker, D. E. Hight, G. Van Buskirk, R. G. Wilson.

Headquarters hotel: Greenville Hotel.

J. E. Rhoads & Sons 471
Wilmington, Del.
Texalon, Tannate and Tanastic belts, and Nytan check straps.

A. S. Jay, P. E. Lambert, L. H. Schwoebel, H. H. Cleghorn, J. T. Hoffman, C. H. Tildes, U. G. Demond.

Headquarters hotel: Poinsett Hotel.

Rice Dobby Chain Co. 432
Millbury, Mass.
(See Holt Associates Inc.)

The Ridge Tool Co. 435
Elyria, Ohio
A full line of Rigid pipe tools including: three new Rigid flaring tools designed to produce exceptionally uniform 45° or 37° flares quickly and easily on copper, aluminum and brass tubing; and two new tubing cutters featuring enclosed feed screws which cannot jam with chips or dirt.

Rieter Co. Ltd. 820
Winterthur, Switzerland
(See American Rieter Co.)

Roberts Co. 808
Sanford, N. C.
The Roberts M-1 and WM-1 spinning frames with spindle speeds of 13,000 to 15,000 r.p.m. will be shown. The increased spindle speeds are said to represent production gains of 50% or more. Both frames are large package, all-ball-bearing units of the 25" width.

A significant development is the new all-ball-bearing head and head gearing

*Shown at Atlantic City.

arrangement providing much greater versatility for a broad range of drafts and twists with only one-fourth the number of change gears formerly used.

On the ArrowM-1, designed for cotton system spinning, five twist constants are provided. Using a standard set of 36 to 54 eeth change gears, the full range of turns per inch are obtained. Four draft constants are also provided; and by using a standard set of 46 to 69 teeth change gears drafts of 6.5 to 52.5 are obtained. The M-1, which will be operating on various cotton and synthetic yarns, also features an improved Posi-Wate top roll suspension system.

The WM-1, which will be operating on long fiber synthetics and blends, features two new fully ball bearing Permaset drafting systems. One is a four-roll full controls system and the other is a three-roll adjustable system.

*Shown at Atlantic City.

Other Arrow refinements on the units include: solid aluminum layback separators; nylon cradles; a simplified Una-Ring balloon control permitting higher speeds; new double tape tension system providing constant speed from spindle to spindle and easy changing for reversing the twist; completely enclosed spindle base rails for lint exclusion and reduced cleaning; a new variable speed drive which permits speed adjustments while the frame is running; substantially wider spread feet for greater frame stability; and a streamlined foot end arrangement with improved UnitVac power suction cleaning that directs air flow over the motor.

Roberts will also have an exhibit of eight new drafting systems: four for cotton system spinning; two for worsted system spinning; and two for roving.

Robert E. Pomeranz, Jonathan N. Pomeranz, Ralph Padgett, Ed Blackwood, Meade O. Bradshaw, Fred Glass, Meigs C. Golden, Selwyn Kent, Carl E. Oliver, William A. J. Peacock, William Rankin, Jack Stanley, R. Frank Walker.



TWO BIG PACKAGE, ALL BALL BEARING Arrow Spinning Frames will be featured in the display by Roberts Co., Booth 808. One will be this Model WM-1 worsted system frame for long fiber worsted, synthetic or blended yarns; the other the Model M-1 cotton system frame. Both are 25 inches wide. The WM-1 will feature two new fully ball bearing PermaSet drafting systems, one a four-roll full control system; the other a three-roll adjustable system.

Edward B. Rock 908
New York City
(Representing Comesta Spindle Co.)

E. F. Rose & Co. 207
Maiden, N. C.

Ross-Meehan Foundries 303
Chattanooga, Tenn.
(1) A variety of Metal castings. (2) Meehanite metal bar, bushing and gear blank stock.

Donald W. Kling, Paul T. Gaynor, James L. Payne.

Headquarters hotels: Poinsett Hotel and Ottaray Hotel.

Rotherm Engineering Co. 215
Chicago, Ill.
Revolving joints, expansion joints, fiber glass air nozzles and humidifiers.

H. S. Kuhn, Harley D. Hohm.

B. S. Roy & Son Co. 206
Worcester, Mass.
(Representing Peter Wolters and Hans Nocker Iron & Metal Foundry)

(1) Nissex card clothing of all types. (2) Model SM7/400 centerless cot grinder for grinding top rolls exactly round and free of eccentricity to their arbors. (3) Model Wt-56 electric cot tester which measures roundness and beat to the roller-shaft, and variations from straightness or cylindricity (taper, barrel-shape, etc.). (4) Nocker card flats. (5) Alumaroy special aluminum alloy drum grinders which are designed to eliminate "low middle" grinding conditions. (6) Microsision grinding cradle which is designed to eliminate "ear settings" and guesswork while grinding costly and critical flat wire. The unit enables the card grinder to see his settings and adjustments when grinding flats. Its adjustments are positive, visual and graduated in thousandths of an inch. (7) Featherweight all aluminum stripper and burnisher roll. (8) Special vitrified wheel grinder for metallic wire. (9) Parts and accessories.

F. Buonomo, D. G. Bousquet, F. J. Leppkes, F. E. Barnes, E. H. Duke.

Headquarters hotel: Ottaray Hotel.

Edward S. Rudnick 905
New Bedford, Mass.
(Representing Mitsui & Co., O-M Spinning Machine Mfg. Co., Kanegafuchi Machine Mfg. Co., Nihon Spindle Mfg. Co., Daiwa Spinning Co.)

(1) The Kanegafuchi Auto-Doffer for spinning frames, twisters, etc.* The unit eliminates the hand operation of doffing the full bobbins and replacing empty ones. The unit travels at about 25 f.p.m. with both a left-hand and a right-hand doffing head travelling simultaneously so that full-length frames are completely doffed in less than two minutes. Mill installations are said to have shown that the efficiency in doffing, in terms of ends-

When the Curtain goes up at the Greenville Show,

the Spotlight will be

ON THE STAGE!

THE McLEOD COMPANIES—ODELL MILL SUPPLY COMPANY, of Greensboro, N. C., and GREENVILLE TEXTILE SUPPLY COMPANY, of Greenville, S. C., will exhibit the products of the following manufacturers:

BOWEN-HUNTER BOBBIN COMPANY
East Corinth, Vermont

LESTERSHIRE SPOOL DIVISION
National Vulcanized Fibre Co.
Johnson City, N. Y.

BOSTON GEAR WORKS
Quincy, Mass.

CHISHOLM-MOORE HOIST CORP.
Tonawanda, N. Y.

DARNELL CORPORATION
New York 13, N. Y.

W. T. LANE & BROTHERS, INC.
Poughkeepsie, New York

PIONEER HEDDLE & REED CO., INC.
Atlanta, Georgia

ECLIPSE MACHINE DIVISION
Bendix Aviation Corp.
Elmira, New York

The following representatives from the two McLEOD COMPANIES will be present:

ODELL MILL SUPPLY COMPANY—W. T. McLeod, John R. Foster, Dallas C. Neese, George H. Bachelor, C. Leon Jones, Jr., C. Weldon Fields, Charles G. Price, Clyde Hathcock, George H. Reynolds, C. Frank Roberts, Thomas G. Tyson, Marion Maynard, Joe Maddux, L. W. Seaver.

GREENVILLE TEXTILE SUPPLY COMPANY—W. L. Brigham, T. M. Bailey, Hugh Z. Graham, John T. Mason, E. W. Ware, Jr., R. E. Stephens, R. B. Dorman, Jr., W. H. Jordan, Rudolph Craig, James E. Poston, J. O. Leonard, Gerald C. Roberts, Mrs. Rachel T. Wilson, Mrs. Velma Fowler.

The McLEOD COMPANIES offer maintenance, repair and operating supplies for the textile industry in Virginia, North Carolina, South Carolina, Georgia, Alabama and Tennessee. Our trained representatives, calling on all textile mills in this area, offer valuable advice, a wealth of experience and the best in supplies.

In addition to our textile mill supply department, we maintain at both Greensboro and Greenville efficient engineering departments. These departments are unique in their specialized services. Our qualified textile engineers are always ready to help you with equipment problems.

Our Greenville house has a complete industrial electrical department. Qualified personnel are ready to serve you at all times.

ODELL MILL SUPPLY CO. - Greensboro, N. C.
GREENVILLE TEXTILE SUPPLY CO. - Greenville, S. C.

1919 — 41 Years of Service and Experience — 1960

down, is 30% to 50% higher than manual doffing. (2) OM-S sliver-to-yarn spinning frame for cotton and synthetics.* Latest features on the unit are an automatic spindle speed regulating apparatus, automatic stop and rail lowering motion (with doffing pilot lamp), automatic starting clutch, automatic lubrication, and increased can and bobbin capacities. (3) Daiwa's improved carding attachment*—a special attachment for cards which consists of a specially designed hollow licker-in roller, with perforated surface area, between the present licker-in and cylinder. With this attachment: carding efficiency is increased 400%; damage to card clothing is minimized; nep count is reduced by 30 to 40%; sliver evenness is improved 10 to 15%; yarn quality is improved in evenness and tensile strength; and a lower grade and staple can be used to achieve equal yarn qualities. (4) Other equipment and supplies including: Spi-Ra-Clean automatic spindle cleaner and lubricant.

Edward S. Rudnick, William Bowlin, Clarence McMahan, Mas Kume, Tad Hiki, Jim Hasagawa.

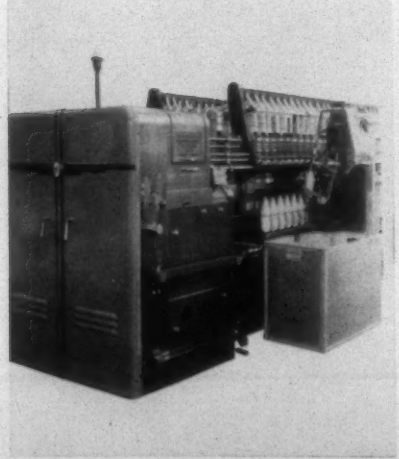
Headquarters hotel: Greenville Hotel.

Saco-Lowell Shops 835-A
Replacement Parts Division
Greenville, S. C.
Spinning and roving changeovers; double doffer condenser; Victor travelers; rings; and Saco-Lowell and Hartford spindles.

A. L. Landau, H. S. Boyd, G. W. Kluttz, J. D. Burnette, J. B. Stutts, T. E. Campbell, F. E. Jackson, F. P. Bodenheimer, C. H. Green, M. B. Crawley, C. W. Wilbanks, A. H. Moffatt, Norman Leech, W. Hudson.

Headquarters hotels: Greeenville Hotel and Poinsett Hotel.

*Shown at Atlantic City.



JAPANESE AUTO-DOFFER — Edward S. Rudnick, New Bedford, Mass., will feature this Japanese Auto-Doffer in its exhibit at Greenville. The unit is designed to automatically doff a 400-spindle frame in less than two minutes. It's a product of Kanegafuchi Machine Co. in Japan.

Schachner Leather & Belting Co. 228
Charlotte, N. C.

Scharer Textile Machine Works 449
Erlenbach-Zurich, Switzerland
(See Yeomans Textile Machinery Co.)

W. Schlafhorst & Co. 482
M. Gladbach, Germany
(See Terrell Machine Co.)

Schmidt Mfg. Co. 456
Greenville, S. C.
(1) Shirley loom testing and fabric testing instruments. (2) A variety of Microshave temples with floating cutters and a patented bar temple. (3) Grobtex light metal harness frames for plain, leno and special weaves, and Grobtex and Doupe heddles. (4) The Matador reed cleaning and polishing machine with feed barrel device reciprocating in rotary motion. (5) A shuttle adjusting machine.

L. O. Talley, Ted Houston, Joe Motta, Oliver Walker, Ed Farmer, Adolph Couturier, William Grant, Clayton Schmidt, Ralph Schmidt.

Scott Testers Inc. 401
Providence, R. I.
(1) Model CRE electronic strain gage type tester with pushbutton controls. The unit features an upward moving crosshead which is designed to contribute to operator convenience and efficiency. (2) Model X-3 tester for making fabric tear and tensile tests to 75 lbs. maximum. (3) Model T-1 tester for twist determinations of plied and cabled yarns. (4) Yarn handling and reeling equipment.

John E. Hargreaves, Walter E. Anderson.

The Selig Co. 232
Atlanta, Ga.
A complete line of sanitary and floor maintenance materials.

William F. Bode, Alvin Hamburger, Lee Strasburger, Charles Pearl, Sol Hayes, Bob Hyatt, Milton Doctor, Charles Vickery, Max Fine, Joe Schulman, Alvin Schwab.

Headquarters hotel: Greenville Hotel.

Seydel-Woolley & Co. 238
Atlanta, Ga.
A complete line of textile wet processing chemicals and warp sizing compounds.

Vasser Woolley, Paul Seydel, John Seydel, Welling LaGrone, Dave Meriwether, R. P. Anthony Jr., Charles Braswell, W. H. Cutts, F. B. deLoach, E. F. Harrison, D. Baxter Hemphill, A. V. McAlister, V. R. Mills.

Headquarters hotels: Greenville Hotel and Poinsett Hotel.

Shell Oil Co. 103
New York City

Sherrill Mfg. Co. 270, 909
Gastonia, N. C.

Signode Steel Strapping Co. 835-B
Chicago, Ill.
(1) A fully automatic power strapping machine. (2) Air powered and electric strapping tools. (3) Power strap feeder. (4) Steel strapping. (5) Dispensers, cutters and accessories.

M. L. Fagin, C. Howard Carlson, J. M. Moon, M. C. Carlson, R. S. Schwerman, T. O.'Neal, J. Garrett, C. Talbutt, L. Sierra, R. Atwood, J. Burch, M. Helsley.

J. E. Sirrine Co. 204
Greenville, S. C.
Reception booth.

R. R. Adams, F. B. Bozeman, W. L. Carpenter, R. B. Epting, G. C. Gaskin, J. T. Higgins, C. J. Liles, H. W. Meakin, W. H. Nardin, W. A. Robinson, M. M. Stokely, A. D. Asbury, J. H. Bringhurst Jr., W. H. Crumley, H. S. Forrester, E. E. Gerken, S. M. Hunter, Milton Lite, I. J. Mikell, G. P. Patterson, L. A. Seaborn, C. T. Wise, J. K. Blackman, L. W. Burdette, G. W. Cumbus, H. W. Frederick, O. F. Going, M. C. Kendrick, F. M. Martin, G. R. Morgan, A. M. Rickman Jr., J. F. Spellman, George Wrigley Jr.

Skinner Valve Division 264
New Britain, Conn.
(See Livingston & Haven Inc.)

Slip-Not Belting Corp. 346
Kingsport, Tenn.
Nucheck checking device for high-speed looms.

Otto R. Cox, O. L. Carter, E. S. Meservey, G. H. Spencer, J. R. Youngblood, Melvin Bell, Eugene C. Auten.

Smith Enterprises Inc. 318
Rock Hill, S. C.
Safety award programs.

Dick Burris, Frank Morecock.

B. Snowiss Fur Co. 432
Lockhaven, Pa.

M. R. Snyder Co. 903
Charlotte, N. C.
(Representing Acme Chain Corp., Durant Mfg. Co., Globe Gear Co., The Hilliard Corp., Stearns Electric Corp., Stearns Magnetic Corp. Winsmith Inc.)

——The Greenville Show

Sonoco Products Co. 244
Hartsville, S. C.
A complete line of cones, tubes, cores, spools, bobbins, folding boxes and paper specialties.*

C. H. Campbell, C. W. White, W. K. Lewis Jr., J. A. Reagan Jr., W. R. Gunnells, C. B. Harper, W. M. Carpenter, A. P. Hearon, P. F. Williams, W. R. Peacock, B. H. Biggs, H. M. Adams.

Headquarters hotel: Greenville Hotel.

Southeastern Loom & Machine Works 130
Greenwood, S. C.
Maxbo shuttleless loom.
(See Edda International Corp.)

C. L. Beaudrot, Joel Harrison, Billy Flynn.

Southeastern Safety Appliances Inc. 301
Atlanta, Ga.
(1) Ansel fire equipment. (2) Scott Air-Paks and inhalators. (3) Davis industrial first-aid supplies. (4) Miller linesmen's and industrial body belts, safety straps, tools, etc. (5) Charleston rubber gloves. (6) Union industrial air sampling instruments.

George D. Johnson, P. H. Ellington, C. L. Thomas Jr., G. D. Johnson Jr.

Headquarters hotel: Greenville Hotel.

Southern Machinery Co. 515
Greenville, S. C.
The Hunt let-off on a Draper XD loom.

James W. Stuart, Ed J. Williams, Felix Hooper, Arch E. Cutting, Harry Kennedy.

Southern Rubber Co. 274
Greensboro, N. C.

Southern States Equipment Corp. 266
Hampton, Ga.
(1) Complete coilers designed to deliver sliver into the can in smooth, over center coils. The tube gear throw is large and the resulting large center hole gives the greatest possible weight per can. The units feature lubricated ball bearings throughout and are available for can diameters of 14-20" and for can heights of 36-42". (2) Type CD-2 individual card drive, a compact, easily-installed unit. The CD-2 features an expanding clutch to control and transmit the torque applied to the cylinder during the critical start-up period. Power for the drive is supplied by a 1½ h. p. high-torque motor. (3) Alley-Scat can dolly

*Shown at Atlantic City.

Does YOUR Warper have . . .

• DENSITY CONTROL?

• UNIFORM SPEED CONTROL?

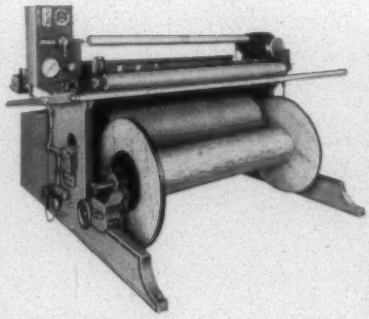
ALLEN MODEL "G", the modern warper with PATENTED HYDRAULIC CONTROL, gives you:

Uniform Density of Warp throughout entire build-up.

ALLEN PATENTED HYDRAULIC CONTROL maintains uniform pressure at all times between the beam surface and the pressor roll which drives the beam. The nip between this roll and beam is always at same distance and angle, so yarn tension is kept uniform. HARD-SHELL, SOFT-CENTER WARPS ARE POSITIVELY ELIMINATED.

Controlled Uniform Yarn Speed, variable at will.

ALLEN PATENTED HYDRAULIC CONTROL maintains uniform pressure between beam surface and driving roll, assures positively uniform yarn speed—free from the abrupt jumps in speed experienced with now obsolete methods of constantly adjusting the drive speed in an endeavor to compensate for warp build-up. In addition, ALLEN VARIABLE SPEED DRIVE enables the oprator to SELECT EXACTLY THE RIGHT SPEED FOR THE YARN BEING RUN. This means your ALLEN warper is always adjusted for MAXIMUM production consistent with QUALITY.



Don't put up with old-style warping!

Put this modern warper concept to work along with your other modern equipment. Time-proved, patented,—no other warper has these features.

REQUEST "MODEL G BROCHURE."

Allen Company, Inc., New Bedford, Mass., U.S.A.

ALLEN MODEL "G"

World's Most Advanced High Speed Warper

The Greenville Show——

that fastens to the bottom of any can without drilling or alterations. It features a coupling device that makes it possible to couple cans together for the train-like movement of several cans at one time. (5) Coiler conversions.

C. W. Walter, T. E. Pyron, Lamont Brooks, W. N. (Bill) Watkins, W. A. (Bill) Knapp, John Walters, Frank Birchfield.

Headquarters hotel: Greenville Hotel.

Southern Textile News 313
Charlotte, N. C.

Spaulding Fibre Co. 202
Materials Handling Division
Dover, N. H.
(1) Vulcanized fibre seamless roving cans in a variety of top styles.* (2) Lightweight vulcanized fibre trucks.* (3) Conditioning box of laminated construction to eliminate warpage under high humidity conditions. (4) Various styles and sizes of doff boxes and quill boxes made from vulcanized fibre.* (5) Spauldite lap rolls.*

A. R. Whitehouse, D. F. Dawson, B. C. King.

Headquarters hotel: Colonial Court Motel.

Square D Co. 847
Detroit, Mich.
(1) A new and safer N.E.M.A. 12 type combination starter. (2) A new N.E.M.A. 4 stainless steel enclosed combination starter. (3) Two new adjustable speed drives. (4) A drawout switchgear for distribution of electric power throughout the mill. (5) Centrally located motor starters and disconnect installations.

Don Carter, Hal Prescott, Irv Swanson, Len Murrans.

Headquarters hotel: Orvin Motor Court.

A. E. Staley Mfg. Co. 412
Decatur, Ill.
The new high-temperature converter for preparing warp sizes from unmodified corn starch.* The system is designed to go beyond mere starch cooking and to achieve conversion of the starch paste to a unique, non-congealing product of reduced viscosity. The system starts and stops itself automatically and self-cleans after each stoppage with no dilution or change in the finished product uniformity.

The converter delivers a highly uniform warp size with precision control of solids concentration, viscosity, degree of conversion, other starch properties and blending with size compounds.

Its gelatinization of slurry starch with high-pressure steam is followed by holding the hot pasted starch in a pressure vessel for conversion. All variables—slurry pressure and flow, steam pressure, conversion temperature and conversion holding time—are automatically controlled for uniform and reproducible results.

The system design covers all factors, from bag starch entering the mill to an uninterrupted flow of an entirely new and different starch product to the size boxes.

L. E. Doxsie, N. K. Hammer, E. H. Grosse, W. N. Dulaney, Haley Ector, H. A. Mitchell, D. A. Barnes, C. H. Adams, Crawford Garren, Lonnie McCall, B. O. Merritt.

*Shown at Atlantic City.

Standard Conveyor Co. 115-B
St. Paul, Minn.
(See Engineering Sales Co.)

The Stanley Works 467
Magic Door Division
(See Hatcher Sales Co.)

The Stanley Works 457
Steel Strapping Division
New Britain, Conn.

Stearns Electric Corp. 903
Milwaukee, Wisc.
(See M. R. Snyder Co.)

Stearns Magnetic Corp. 903
Milwaukee, Wisc.
(See M. R. Snyder Co.)

Steel Heddle Mfg. Co. 137
Philadelphia, Pa.
(1) Loom harness equipment for domestic and foreign looms. (2) Dogwood, compressed and impregnated fibre, and improved phenolic shuttle. (3) Cold solder all-metal reeds with new dent configuration for easier passage of yarn obstructions, permitting increased efficiency. (4) Stehedco quills, picker sticks, drop wires and warp preparation equipment.

H. W. Fehr, J. J. Kaufmann, F. H. Kaufmann, A. J. Kieny, G. D. McGill, H. P. Goodwin, S. R. Zimmerman Jr., D. L. Batson, R. B. Stevens, G. D. MacIntyre.

Headquarters hotels: Poinsett Hotel and Greenville Hotel.



HIGH TEMPERATURE CONVERTER — A. E. Staley Mfg. Co., Decatur, Ill., will exhibit its high temperature converter, a new system for preparing warp sizes from unmodified corn starch. The converter is designed to deliver a highly uniform warp size with precision control of solids concentration, viscosity and degree of conversion.

Stein Hall & Co. 425
New York City
Reception booth.

Robert Strasser, Daniel H. Lipman, Leonard F. Costello, Norman H. Nuttall, Edward D. Estes.

Sterling Engineering & Mfg. Co. 216
Wilkes-Barre, Pa.
(1) Self-stacking boards of cadmium plated and stainless steel for handling bobbins, cones, tubes, quills, etc.* (2) Aluminum quill boards and self-stacking tube boards with flexible holder for yarn shrinkage.* (3) Yarn handling trucks.*

George McGee.

Headquarters hotel: Poinsett Hotel.

Stewart-Warner Corp. 803
Alemite Marketing Division
Chicago, Ill.

Strandberg Engineering Laboratories Inc. 504
Greensboro, N. C.
(1) Model M-600 Moisture Monitor for automatic control, indicating or recording moisture.* The operator merely sets the regain and the M-600 does the rest. It is permanently calibrated for both natural and synthetic fibers and any conceivable blend of fibers can be set up on the front panel of the unit without consulting charts or manuals. (2) Model M-101 Moisture Monitor is designed to provide accurate indications of the moisture condition of hygroscopic materials in web, lap or thread form. It is particularly suited for continuous monitoring of moisture information while these materials are being produced. (3) Model M-200 portable Moisture Monitor is designed to give immediate readings of moisture in fibers and blends.* A "per cent regain" reading is obtained by simply applying the unit's detector roll to the material. Three operating positions, easily selectable on the front panel, cover every important application, from warps and fabrics to raw stock, moving or standing, in simple construction or blend, natural or synthetic.

Charles F. Strandberg Jr., W. E. Plemmons, F. Neal Houston, C. B. Pederson, C. Allan Matthews.

Sturdi-Bilt 480
Materials Handling
Division of Union Asbestos & Rubber Co.
Chicago, Ill.
(See Wrenn Bros.)

Superior Bands 272
Anderson, S. C.

Superior Bolster Co. 505
Gastonia, N. C.

Sylvania Electric Products Inc. 414
Charlotte, N. C.
Incandescent and fluorescent lamps, and industrial electronic tubes.

C. C. Beyer, T. Blackwell, J. Hagan, H. R. McClellan.

Headquarters hotel: Holiday Inn.

The Takk Corp. 337
Newark, Ohio
(1) Model 90 Dual Point static eliminator bar with two rows of emitting points, The points are set at a 90° angle for greater area coverage or they are set diametrically opposed in order to scan two webs or two rows of ends on creels with the one bar. Webs or rows of ends can be up to 15" apart. (2) Model 100 Dual Point static eliminator bar—a smaller and more compact unit than the Model 90. (3) Air attachments easily mounted on old or new Takk static eliminator bars to convert them to "air bars." Connected to the existing air supply, they are used for area coverage up to depths of four feet. They can also be used for anti-static dust and lint removal. (4) A standard line of static control equipment.

Walter E. Krause, Walter G. Overman, Walter E. Krause Jr.

Taylor Instrument Cos. 450
Rochester, N. Y.
(1) The Ful-Flex dye cycle controller* which provides adjustable control of starting temperature, initial hold time, rate of rise, hold temperature, hold time, add periods, forced cooling and end temperature.* The unit provides constant indication of the phase of dyeing cycle without the use of push-buttons, enabling resetting during cycle. A toggle switch is provided for making optional, steam on or off at the end of the hold periods without removing the chart plate.

(2) Low-cost system for temperature measurement and control featuring the Sensaire temperature transmitter and 86K indicating control station.* (3) Relative humidity transmitters for the measurement of RH and transmission of the corresponding proportionate air pressure signal.* Adaptable to either air duct or room mounting. (4) Taylor-Emmett Card-O-Timer, a sequence timer insuring instant precise change and repeatability of cycle by punch card.*

Harry Olson, Sanford Levy, Don Munger, W. C. Gray, D. G. Warner, J. E. Barker, H. M. Messenger, R. M. Sawyer, C. H. Miller, J. E. Burnett, F. C. Douglas, J. W. Wilson, H. E. McCurdy, A. L. F. Caradec.

Headquarters hotel: Greenville Hotel.

——The Greenville Show

Terrell Machine Co. 482
Charlotte, N. C.
(1) Autoconer automatic cone winder. (2) Autocopser automatic filling winder for producing bobins with a tip bunch for the Draper magazine.* The tip bunch can be adjusted separately on each spindle, depending on its desired length, location and firmness. The finished bobbins are then loaded into the compartments of the Draper magazine by a device which works as an independent unit attached to each winding head; therefore, different yarns and counts can be quilled on each spindle. (3) Type M roving bobbin cleaning machine.* (4) Type L filling bobbin cleaning machine.* (5) Termaco automatic hopper feeder. (6) Termaco bobbin feeder. (7) Termaco automatic conveyor system.

W. S. Terrell, J. F. Notman, J. R. Hartman, J. E. Scott, Joe Cobb, Dr. Walter Reiners, E. T. Gavin, R. A. Moore, R. Ferguson, M. H. Ridenhour, H. Deussen.

Headquarters hotel: Colonial Motor Court.

Texaco Inc. 444
Atlanta, Ga.
Thermatex greases, Spindura spindle oils, Spintex spindle oils, Texspray compound, Stazon lubricants.

J. M. Hackney, A. C. Keiser Jr., C. F. Walker, H. L. Lanford, J. W. Kay.

Texize Chemicals Inc. 451
Greenville, S. C.
Reception booth.

W. J. Greer, W. N. Kline Jr., C. M. Chalmers, T. D. Greer, C. H. Crews.

Texpak Plastics Inc. 311
Rockingham, N. C.
(1) High density Texpak picker sticks. (2) Low density picker sticks. (3) Doff boxes. (4) Dye house trucks.

John C. Dockery, Nicholas W. Dockery.

Textile Bulletin 203
Charlotte, N. C.
Reception booth.

Junius Smith, Roy Carey, Jim Prendergast, Jack Kissiah, John Lawing.

Headquarters hotel: Greenville and Poinsett Hotels.

*Shown at Atlantic City.

BOOTH 322

Featuring

STEEL ROLLERS

And

GEARS

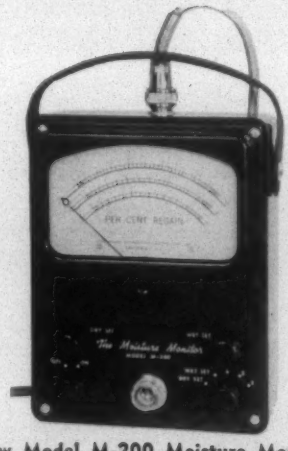
"Our Quality — Your Satisfaction GUARANTEED"

J. L. Blalock, Pres.

Piedmont Machine Shops, Inc.

1401 W. Gaston Ave.
Gastonia, N. C.
Phones UN 5-5128—UN 4-1591

PORTABLE MOISTURE MONITOR



New Model M-200 Moisture Monitor uses hand detector roll to read moisture in moving or standing warps, fabrics, and picker laps.
No calibration is required; the new instrument reads in PERCENT REGAIN for all popular fibers and blends.

STRANDBERG
Engineering Laboratories, Inc.
Dept. B-606 225 Summit Ave.
Greensboro, North Carolina

The Greenville Show——

Textile Grinder Co. 319
Gastonia, N. C.

Textile Industries 408
Atlanta, Ga.

The Textile Shops 501
Spartanburg, S. C.
(See Ira L. Griffin & Sons)

Textile World 224
New York City

Textube Corp. 128
Stamford, Conn.
(See Watson & Desmond Inc.)

H. J. Theiler Corp. 822
Whitinsville, Mass.
(1) Type LE, single cylinder Staubli dobby mounted on a Ruti loom Model BALXM with a reed space of 82½". The loom will be weaving a leno fabric in two widths using Frohlich doup heddles and leno frames. The loom will also be equipped with the new Type N Loepfe optical electronic cutting and copying machine. (2) The 12-spindle Type MSL Schweiter automatic filling winder equipped with dust exhaust system and a new parallel bobbin depositing device. (3) Type CFA Benninger four-bowl laboratory padder.

Hans J. Theiler, Hans Singer, Franz Schmid, Hans Badertscher, Walter Keller, Fritz Bolliger, Horst Mathey.

Toledo Pipe 141
Threading Machine Co.
Toledo, Ohio

Toledo Scale Corp. 415
Toledo, Ohio

Ton-Tex Corp. 431
Englewood, N. J.
(1) Spinner and coner belting. (2) Loom strapping. (3) Card drive belts. (4) Field vulcanizing equipment.

T. A. Lombardi, D. R. Sellars, J. G. Skinner, W. W. West, W. H. Huff, C. H. Crumpton, J. P. Norman, C. Dunn.

Headquarters hotel: Wade Hampton Motel.

Towmotor Corp. 849
Cleveland, Ohio

Trumeter Co. 245
New York City
(1) Trumeter counting and measuring devices.* (2) Maag Type CT 400 6A inspection and rolling machine designed to inspect and wind fabrics on cardboard tubes.* The unit will deliver a straight roll with selvage on selvage by means of an automatic grinding and feeling arrangement which enables the operator to concentrate full attention on inspecting the fabric. The inspection table is adjustable from horizontal to an angle of 60°. A light panel is available at extra cost.

Eric Seligmann, Tom Aydelette, R. Jacobus, Mr. Marti.

Headquarters hotel: Greenville Hotel.

Union Bag-Camp Paper Corp. 350
New York City

Union Steel Products Co. 480
Albion, Mich.
(See Wrenn Bros.)

U. S. Ring Traveler Co. 801
Providence, R. I.

U. S. Rubber Co. 317
Mechanical Goods Division
New York City

Uster Corp. 469
Charlotte, N. C.
(1) Spectomatic electronic slubcatcher operating on two winders.* The Spectomatic is a compact and completely transistorized slub catcher which can be mounted directly on the winder. It will check cotton, worsteds and all blends. The unit will operate on yarn counts of from 20s to 120s. The Spectomatic is not sensitive to power fluctuations and operates on a very low voltage. It will remove 90% of the slubs in any yarn. It can be controlled to cut the slubs, double threads, eyebrow lint, and piece-ups which the mill desires to take out. (2) The Ustermatic warp tying machine featuring average operating speeds of 550 to 600 knots per minute.* Speeds up to 700 knots per minute can be reached on a 72" flat lease. The unit can tie an old warp with or without a lease to a new warp with or without a lease. The Ustermatic features a repeating device which is designed to overcome crossed ends and thick places. (3) Evenness testers for spun production and for continuous filament work. (4) Integrators. (5) Imperfection indicator. (6) Spectrograph. (7) Single end strength tester. (8) Tension Recordograph. (9) Picker lap tester. (10) West Point cohesion tester.

William B. Floyd, Hans Winiger, William L. Boyd, Vernon H. Brockman, Fred Jaggi, Burton E. Sweet.

Ira M. Valentine 429
Atlanta, Ga.
(Representing American Stock Gear Division of Perfection Gear Co. and The George P. Dorris Co.)
(1) Stock spur gears: steel, brass, nonmetallic, helicals, bevels, miters, spiral bevels and hypoid bevels. (2) Worm gear and motorized speed reducers. (3) Torque arm speed reducers, bast type speed reducers.

Ira M. Valentine, Larry Tansey.

Headquarters hotel: Flamingo Motel.

Veeder-Root Inc. 107
Hartford, Conn.
(1) New electronic Count-Paks and predetermining counters.* (2) Pick and hank counters for looms and preparatory equipment.* (3) Predetermining counters for yardage control.* (4) Yardage counters for inspection equipment.* (5) Vary Talley for use in inspection and quality control applications.*

G. H. Anthony, R. C. Conant, H. B. Huff, A. E. Kallinich, C. C. Lombardi, R. G. Perfect, R. F. Quinn, R. L. Stoner, F. J. Swords, J. D. Warfield.

Van Vlaanderen Machine Co. 826
Paterson, N. J.

WAK Industries 231
Charlotte, N. C.
A variety of counting devices.

Charles Walker Co. 228
Leeds, England
(See Schachner Leather & Belting Co.)

Warren Engineering Co. 323
Broadway, N. J.
(1) Weight and lever pressure reducing valves.* (2) Basket strainer.* (3) Black Beauty three-way diaphragm control valve.* (4) Models 1040 and

*Shown at Atlantic City.

K&D

Single Cylinder Waste Machines

with K & D Hopper Feeders, for profitable, efficient waste processing

High-Compression Lap Systems

Aluminum High Speed Sargent Combs for Hoppers

Ball Bearing Drop Shaft Levers for Pickers

Roller Bearing Lap Pins

KIRKMAN & DIXON MACHINERY CO.

OR 3-3346 Greenwood, S. C.

1020 temperature regulators.* (5) Electric motor operated valve.* (6) Warren Wynn diaphragm seal valve.* (7) Pilot operated pressure reducing valve.* (8) Solenoid operated water pressure reducing valve.* (9) Self-contained water and air pressure reducing valve.* (10) Oil and steam pressure reducing valve.* (11) Reverse acting V-port diaphragm control valve.* (12) Direct acting V-port diaphragm control valve.* (13) Air relief trap.* (14) Vaccum breaker.* (15) Blow off atomizer valve.* (16) Taguard safety door lock and sensing element.*

Thomas P. Bruno, Ed Streng.

Headquarters hotel: Poinsett Hotel.

Watson & Desmond 128
Charlotte, N. C.

(Representing Reiners & Fuerst, Zinser Textilmachinen G.M.B.H., Eugen Maier, Ernest Toenniessen, G. Dikkers, Textube Corp., New England Paper Tube Co., Progressive Engineering Inc., Watson-Williams Mfg. Co., Vermont Spool & Bobbin Co., H & P Spool & Bobbin Co., Watson Laboratories Inc., Modern Plastics Engineering Corp., R. M. Taylor Co., Winslow Inc.)

A variety of accessory equipment including: (1) All types of spools, cones, bobbins and quills.* (2) SKF roller bearing spindles; anti-friction top rolls; Ny-Pre-Lon cradles for spinning and roving drafting systems; spinning and twister rings; and flyers.* (3) Yarn inspection machines.* (4) Humidifiers.*

S. P. V. Desmond, C. E. Watson, J. A. Olwell, R. V. McPhail, John Wyatt, E. E. Ball, H. Dorsey Lainer, Ray Norman, Ralph Patton, J. Marshall Gayle.

Headquarters hotel: Catalina Motor Lodge.

Watson-Williams Mfg. Co. 128
Millbury, Mass.

(See Watson & Desmond)

Hubert J. Watson, J. Kimball, Watson, John Wyatt.

Headquarters hotel: Poinsett Hotel.

West Chemical Products Inc. 340
Richmond, Va.

Floor cleaners, disinfectants, insecticides, liquid hand soaps, roll paper towels, industrial hand cleaners, protective creams, protective garments, industrial floor machines, Kotex vending machines.

M. L. Brown, E. B. Messer, R. A. Wade, G. O. Wagoner, J. F. Manning, C. L. Powell, H. W. Anderson.

Headquarters hotel: Poinsett Hotel.

West Point Foundry & 804
Machine Co.
West Point, Ga.

(1) The Pacesetter multi-cylinder slasher. (2) Model 594 corduroy cutting machine which operates at 16 y.p.m. (3) Nemo Jet Cooker. (4) A new economical size pump for the rapid transfer of size solutions. (5) West Point's new drying range and padder.

R. L. Mundhenk, R. V. Lee, C. G. Holt, Bonner B. Brown Jr., R. C. Monk.

Westinghouse Air Brake Co. 264
Wilmerding, Pa.

Westinghouse Electric Corp. 423
Pittsburgh, Pa.

Adjustable-speed drives, pushbuttons, circuit breakers and line starters.

F. T. Benner.

Westinghouse Lamp Division 406
Charlotte, N. C.

Super-Hi fluorescent extended service lamps and new-shape Eye Saving bulbs.

H. J. Thomas, J. W. Johnston, J. D. Mitchell, E. M. Douglas, R. D. Thornton Jr., S. V. Taylor.

Wheel Trueing Tool Co. 110-B
Detroit, Mich.

(See George H. Pennell Co.)

Whitin Machine Works 819
Whitinsville, Mass.

Whitin will demonstrate its latest spinning changeovers in operation on two 36-spindle frames, Models F2 and F3. One frame will be equipped with the new Whitin high-angle roll stands featuring the UT3 top arm on one side and the new double-apron drafting system on the other. One side of the second frame will be equipped with 45° roll stands and the Whitin STA system top arm weighing including the new Casablancas GX2 cradle. The other side of this frame will demonstrate the conversion of a competitive long-bottom apron system

——The Greenville Show

to the Whitin STA-R type of double-apron system. Whitin will also display other changeover components including spindles, rings, ring holders, hand brakes, bobbin holders, etc.

Whitinsville Spinning 209
Ring Co.
Whitinsville, Mass.

A complete line of spinning and twister rings and accessories including the Anti-Wedge and Backslope types.

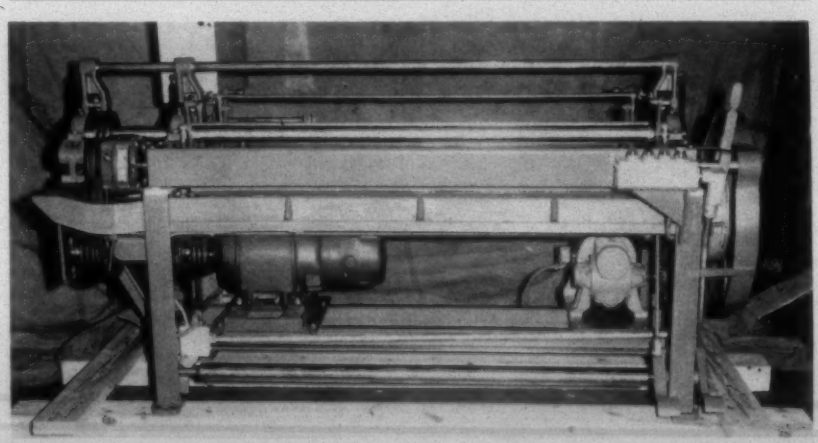
George T. Brown, William P. Dutemple, William K. Shirley, H. Lanier Williams, Charles G. Stover.

Headquarters hotel: Colonial Court Motel.

Willcox & Gibbs 902
Sewing Machine Co.
New York City

The Treufus automatic doffing machine which automatically doffs full bobbins and simultaneously replaces empty bobbins. The elements for both doffing and donning operations are housed in a compact mobile unit. The Treufus is designed for use without modification on spinning frames of all gauges. The established effective doffing and replacement rate is 6,000 to 8,000 bobbins per hour—this takes into account the time necessary to engage and disengage the unit to and from the spinning frame, to unload doffed bobbins and to replenish the supply of empty bobbins. The unit is manually operated—no electric drives are involved and consequently no wiring connections are necessary. The unit is mobile; floor wheels permit it to be easily moved from one side of the spinning frame to the other and from spinning frame to spinning frame. The undercarriage of the Treufus is provided with hydraulic means

*Shown at Atlantic City.



WEST POINT FOUNDRY & MACHINE CO. will display a variety of machines in its display at Booth 804, including this Model 594 corduroy cutting machine designed in co-operation with one of the largest corduroy producers in the country. Other items to be displayed include the West Point Pacesetter multi-cylinder slasher; the Nemo Jet Cooker; a new West Point size pump; and a new drying range and padder.

The Greenville Show——

by which the unit can be readily raised and lowered. This facilitates easy engagement and separation of the Treufus with the spinning frame. In the design of the Treufus extensive use is made of ball bearings to insure smooth and uniform movement of the unit along the guide rails which are attached to the spinning frame on both sides.

The doffing operation is accomplished by a series of bridge-like members which form an inclined plane. The base of each bridge member is equipped with an open plow-like element. The first bridge engages the base of the bobbin and by virtue of the forward motion of the machine breaks the contact of the bobbin with the spindle and partly raises the bobbin on the spindle. The succeeding bridge members as they pass each spindle and its related bobbin, because they form an inclined plane, raise the bobbin vertically on the spindle until it is completely separated and slides down a chute to a receiving box in the unit. The process of doffing and bobbin replacement continues as long as the Treufus is in motion. A guide is located in advance of the first bridge member which makes contact with the yarn and as a consequence moves both yarn and traveler to the back of the ring.

Empty bobbins are loaded in a drum and are fed automatically to a point of discharge from which they are released by a sensing device which triggers a releasing mechanism. The releasing mechanism is synchronized by the sensing device which bears against the spindle thus timing the accurate placement of the empty bobbins on the spindles. A spring loaded hammer makes contact with the top of the replacement bobbin coincidentally with its release by the triggering mechanism.

Norman Wonnacott, Frank Meeker, E. DuBuis.

Headquarters hotel: Ottaray Hotel.

T. B. Wood's Sons Co. 242
Chambersburg, Pa.

(1) An individual card drive—eliminating lineshaft power losses, and the maintenance of flat belts, lineshafts and pulleys. The unit features Life-Lube ball bearings that do not require lubrication. (2) VPS variable speed drive for spinning frames. The unit is a wide-range, spingle-groove stationary control variable pitch sheave with both flanges moving simultaneously by turing a single adjusting screw. (3) MS and MCS wide range motion control devices. The MS variable speed pulleys incorporate a new design aimed at permitting accurate and infinite speed adjustment through each pulley's operating range and completely eliminating fretting corrosion, freezing and sticking. (4) Sure-Flex flexible couplings designed to provide dependable power transmission while withstanding all types and combinations of shock, vibration and shaft misalignment and end float. (5) Ultra-V drives. The drives are designed to handle, within a given space, up to three times as much horsepower as conventional belt drives. (6) Sure-Grip conventional V-belt drive. (7) Timing—a compact positive belted drive which is said to combine the advantages of ordinary belt drives with those of chain and gear drives. The positive grip of belt teeth with pulley grooves eliminates slippage and speed variation. The absence of metal-to-metal contact eliminates the need for lubricating. The load capacities of the belt drives range from subfractional to 600 h.p. and up. The speed range is 0 to 16,000 f.p.m. (8) Life-Lube ball bearings providing built-in lifetime lubrication. (9) Quick-Slide motor bases for motion and stationary control variable drives.

H. M. Bowman, R. C. Reese, Charles R. Shank.

Headquarters hotels: Poinsett and Holiday Inn.

Winsmith Inc. 903
Springville, N. Y.

(See M. R. Snyder Co.)

Wrenn Bros. 480
Charlotte, N. C.

The Yale & Towne Mfg. Co. 470
Philadelphia, Pa.

(1) The KL58 electric fork-lift truck. The unit is a compact, low-silhouette, sit-down rider type truck with infinite speed control. It is capable of lifting loads up to 150 f.p.m. The infinite speed control is designed to give high starting torque and smooth operation by eliminating time delays between speed changes. The 57" unit will turn in its own length. (2) The G54 Gasoline lift truck available in 3,000, 4,000 and 5,000-lb. capacity models in both cushion and pneumatic tire types. The unit has an automatic torque transmission to eliminate manual gear changing. A new inching arangement permits a flexibility to suit the circumstances of any operation. (3) Midget King link chain electric hoist —available in either hook or trolley types. (4) Load King trolley hoist. (5) Extend-A-Load warehouser electric truck. (6) Load King hand hoist with a capacity range of ½ to 12 tons. (7) Model D Pul-Lift ratchet hoist.

C. R. Dean, L. W. Jander, J. H. Brown, N. C. Baker, R. H. Marsh, L. P. Jones.

Headquarters hotel: Flamingo Motel, Taylors, S. C.

Yeomans Textile Machinery Co. 449
Spartanburg, S. C.

(Representing Scharer Textile Machine Works)

(1) Scharer fully automatic high-speed filling winder for cotton yarns. (2) Scharer winder for wool yarns. (3) Filling winder for filament yarns equipped with pinboard stacking device. (4) Filling winder for cotton yarns equipped for Draper magazine stacking. (5) Scharer pineapple cone winder.

Jacques Scharer, Max Jent, Ootto Zollinger, Kaspar Laager, Charles L. Yeomans, Charles H. Turner.

F. A. Young Machine Co. 257
Gastonia, N. C.

(1) Young will introduce a new spinning frame, the Vertical Y5 which will draft from 10 to 650 using either drawing sliver or 14x7 single or double creel bobbins. The unit is completely anti-friction with no points of lubrication. It is 24" wide and features self-aligning bottom roll bearings. The frame also includes new spiral fluted rolls, which are designed to prevent roll patterns due to parallelization of flutes and top rolls. The spiral flutes also eliminate any minute vibration that might set up fretting oxidation. (2) Micro-Electric aligning equipment which is designed to enable mill mechanics to check, align and level all rolls and stands within a maximum period of two hours per frame. The equipment will enable alignment to within .005". (3) NYAF changeover frames will be shown with Casablanca changeover and Roth changeover with a saddle and top roll assembly utilizing double bearing rolls on all three lines. (4) Spiral fluted precision induction hardened drafting rolls. (5) Sample machine parts and repairs including induction hardened spindles, steel rolls, lap pins and plastic finished flyers.

Bobby Wright, J. W. Long, Bayne Keever, Charles Webster, David Young, James Lindsay, F. A. Young, Morgan Ruppe.

Headquarters hotel: Holiday Inn, Greer, S. C.

Zinser Textilmaschinen G.M.B.H. 128
Ebersbach-Fils, Germany

(See Watson & Desmond Inc.)

*Shown at Atlantic City.

Official Registrars

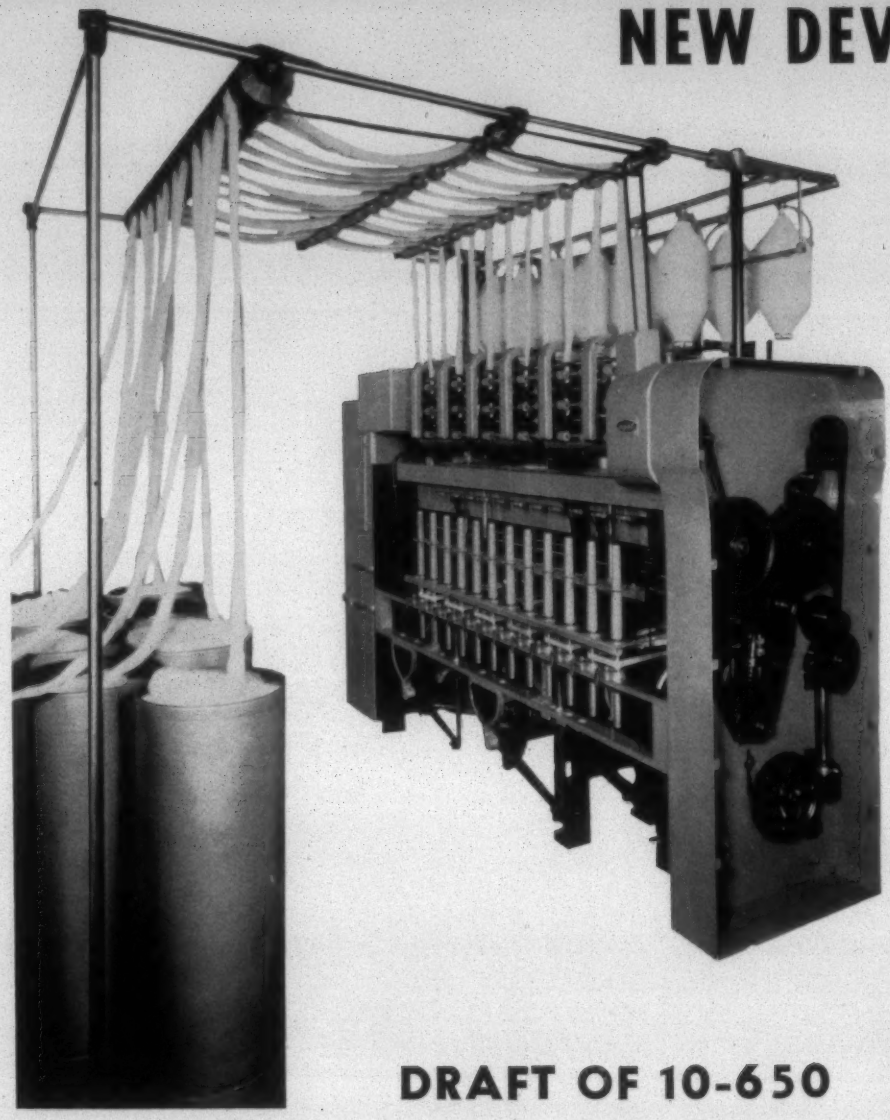
AS IN PAST YEARS, THE BULLETIN will again serve as official registrars for the Southern Textile Exposition. If we can be of service to you, please don't hesitate to call on us.

NEW DEVELOPMENTS

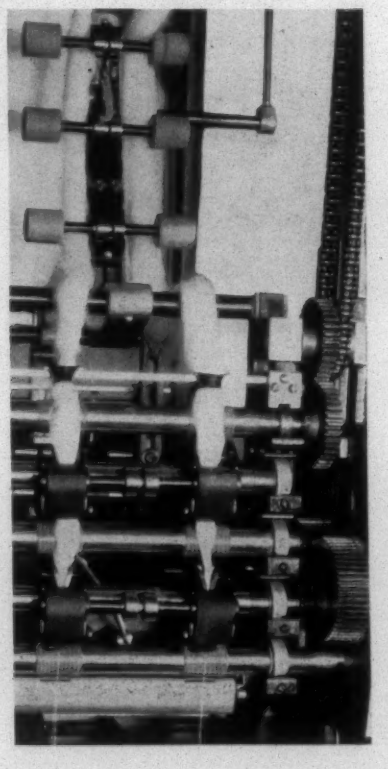
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F. A. YOUNG
MACHINE CO.

NEW VERTICAL
Y-5



Note: Spiral Fluted Rolls and Double Bearings



DRAFT OF 10-650

FROM DRAWING SLIVER or 14X7 BOBBINS

SEE IT AT THE GREENVILLE SHOW—

BOOTHS 257-258

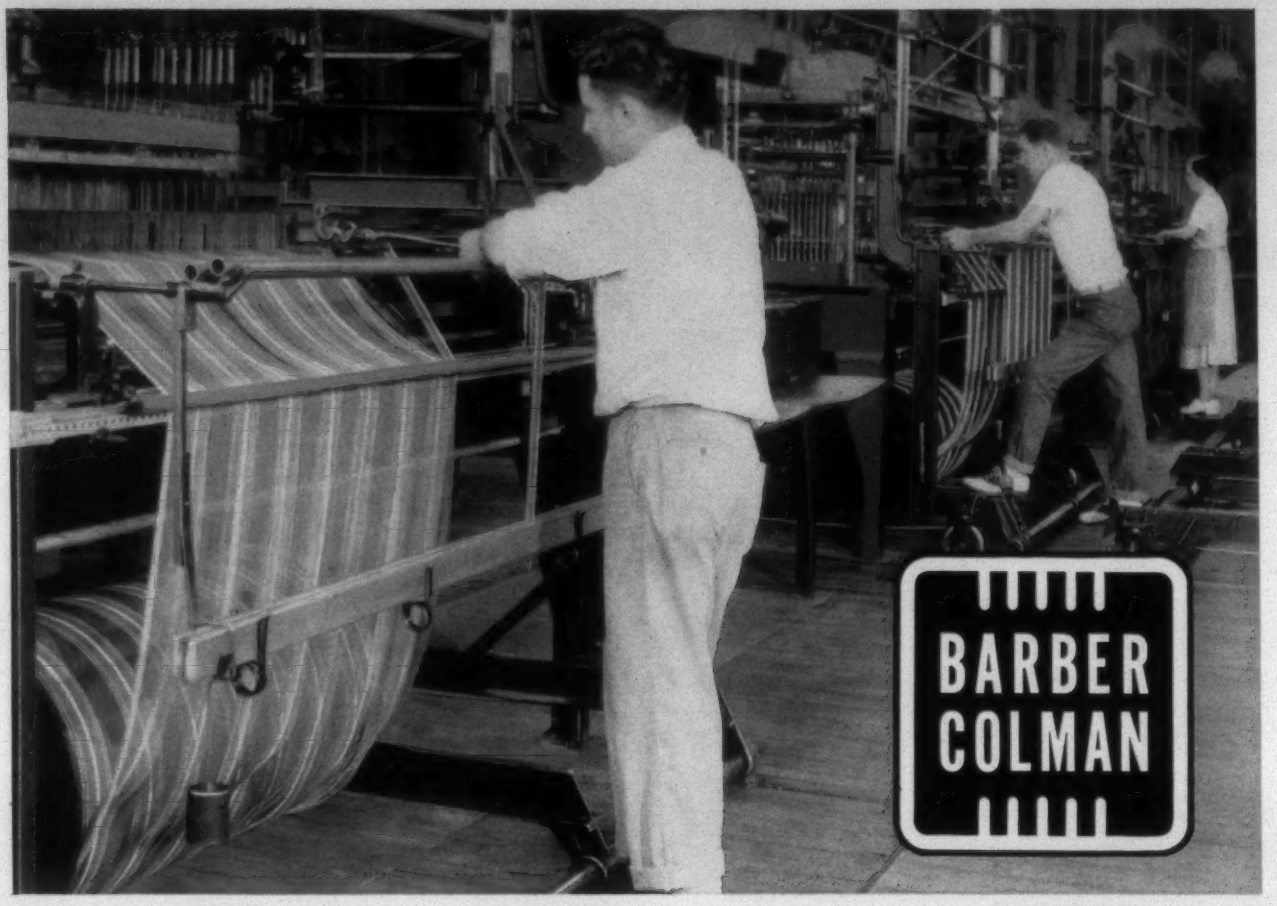
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21st SOUTHERN TEXTILE EXPOSITION

GREENVILLE, S. C.
OCTOBER 3rd–7th
1960



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The Textile Outlook: Short And Long-Term Views

By DR. WILLIAM H. MIERNYK*

IMMEDIATELY AHEAD: THE DANGER OF A DOWNTURN
THE NEXT DECADE: BOTH PROMISING & CHALLENGING

FOR the past two years conditions in the American textile industry have been good. After approximately a decade of decline, textile production and employment began to rise in 1958. Since then prices have increased, new orders have held up remarkably well, and inventories have been maintained at a relatively low level. This has been the longest period of sustained prosperity enjoyed by the domestic textile industry since before the recession of 1947-49. The question is, how long will it last?

The Short-Term Outlook

A year ago, I projected a decline beginning sometime during the second half of this year. A few recent straws in the wind support this early projection. Unless there is an unusual turn of events during the months immediately ahead the rate of new orders will begin to drop off, prices will edge downward, and cloth inventories will begin to accumulate. Indeed, the first break in prices can be traced back to last January when the price of 80-square cotton cloth dropped from the highest point it had reached in almost seven years. It will take time, of course, for these early signals to be received by converters, and even more time before they will be transmitted back to the mills. But by the end of this year, the cumulative downward spiral of textile production, employment and prices is expected to be clearly evident.

The forecast of a decline during the second half of this year which I made more than a year ago was based largely on an analysis of the past history of textile cycles in this country. Actually, if the simple method of averaging the length of prior cycles had been employed a downturn would have been projected much earlier. But there were indications at the time this short-term forecast was made that the current revival in textiles would last longer than the average of past textile cycles. The most important of these was that the long-term downward drift in the domestic textile industry appears to have ended. Thus, in part, it is my view that the past two years of textile prosperity have been compounded of a typical cyclical upswing plus the beginning of a change in basic trend in over-all domestic textile activity.

Leading Indicators

Since that early forecast was made, however, additional evidence has been developed to support the view of a short-term, or cyclical, decline beginning later this year. Among the most important tools used by the short-term forecaster are "leading indicators." Such indicators for the textile industry have been notoriously weak in the past. One of these has been the price of 80-square print cloth. But typically this price has broken fairly close to the beginning of a downturn, and not at all soon enough to warn the industry of what might lie ahead in the immediate future. Thus it has not been a particularly useful leading indicator. For the past few months, however, one of my associates in the Bureau of Business and Economic Research at Northeastern University—Dr. Manual Zymelman—has been experimenting with the development of other, and more general, indicators which hopefully will be of some use in predicting short-term textile fluctuations in the future. One of these is based on a statistical analysis of the relationship between production and inventories where there appears to be a rather long lead-time (seven months). Another is based on the relationship between a measure of demand, which Dr. Zymelman has developed, and textile prices. While the lead-time here is considerably shorter than that between in-

*Professor of Economics and Director, Bureau of Business and Economic Research, Northeastern University, Boston, Mass. Dr. Miernyk also served as Staff Director of the Subcommittee to Investigate Problems of the Domestic Textile Industry, of the Committee on Interstate and Foreign Commerce, U. S. Senate, 85th Congress, 1958-1959.

NOTE: Dr. Miernyk was one of the featured speakers at the special seminar, "A Look at the 1960s," presented by Werner Textile Consultants as a sideline feature to the American Textile Machinery Exhibition-International in Atlantic City, N. J. Other papers presented, and carried elsewhere in this issue, include "Vistas of Textile Technology," Walter Regnery, Joanna Cotton Mills Co.; "Financing Equipment Modernization," Walter M. Kelly, Commercial Factors Corp.; "A Marketing Man's Outlook on Machine Modernization," C. W. Bendigo, Werner Textile Consultants.

Output per worker in the textile industry rose 41% between 1947-57; A further increase of 62% is expected by 1970; Result: a 25% decline in total textile employment, a 33% decline in broadwovens.

ventories and production, this relationship is undoubtedly the more significant of the two. Much more work of this sort will have to be done to develop forecasting tools for the textile industry, but this is an important beginning. And the behavior of these indicators in recent months lends further support to the projection of a downturn sometime during the next two quarters.

Informed Judgment

It is important to stress that such forecasting techniques cannot be applied mechanically. The most important ingredient in making short-term forecasts is informed judgment. Thus forecasting is not a mechanical process, and the forecasts themselves are anything but infallible. They play a useful role, however, in providing one of the elements which management must consider when making plans for the immediate future.

Analysis of textile cycles can make another important contribution to management. There is a tendency, when business is good, for management to feel that it will remain good for a long time. And there is a tendency in the other direction—when business is bad—to conclude that things will steadily go from bad to worse. Management, heavily burdened with day-to-day decisions cannot be expected to take the historical view of those who study the industry from outside. But occasional references to the past should be of more than casual interest to management during either the rising or declining phase of the textile cycle. This is particularly important in an industry like textiles where new problems appear to crop up as rapidly as old problems are solved.

The Long-Term View

While it is important for textile management to be aware of the pattern of short-term fluctuations, it is equally important to take a long look at the future from time to time. Plans for capital investment, expansion, research and product development cannot be geared to the short-term outlook. As the planning horizon extends, long-term projections become increasingly important. The projections which I will discuss briefly are for the trend in textile production in the U. S. from 1958 to 1970. It is important to emphasize the word *trend*, because this is all that can be projected for the long-term. No one can say what the actual level of textile production in the U. S. will be in 1970. But by making a set of assumptions—based on the past behavior of textile activity in the U. S.—and by bringing in new variables which relate to anticipated economic growth over the next decade, one can make projections of long-term trends. This is the procedure that was followed in deriving the results which I will discuss in a moment.

General Asumptions

First, however, it might be worth mentioning briefly the general assumptions upon which the projections were based. These are:

(1) That there will be no major war between now and 1970.

(2) That there will be no fundamental change in the economic organization of the U. S., or in our relations with other countries.

(3) That there will be no major technological breakthrough in textiles which would revolutionize textile production. It is assumed, however, that there will be substantial increases in productivity between now and 1970.

(4) That there will be no major change in our international trade policy between now and 1970. The assumption is made that textile imports will continue to rise, but that the rate of increase will be subject to some control.

In addition, certain specific assumptions were made about textile exports, imports, per capita consumption and production per worker. These specific assumptions are based upon the actual trends from 1947 through 1957. On the basis of these assumptions, a statistical model was developed which produced the following results.

Exports-Imports, 1947-57

Between 1947 and 1957, exports of broadwoven fabrics in the U. S. declined by slightly more than 41%. It is assumed that by 1970 there will be a further drop of 22%. Meanwhile, imports had gone up by 650%. The assumption for the future is that imports will continue to rise by an additional 350%. Per capita consumption, during the base period, dropped 13%. A further decline of 7% was assumed in making the projection. Finally, output per worker in the domestic textile industry rose 41% between 1947 and 1957, and a further increase of 62% by 1970 was projected.

While these assumptions are based on past trends, they are not simple extrapolation of those trends. For example, much of the decline in per capita consumption during the base period resulted from a drop in the industrial uses of textile mill products. While this is likely to continue, it will do so at a significantly lower rate in the future than in the past since the substitutions that could most easily be made have already taken place. And the textile industry is making an effort to recapture at least part of the industrial market which it has lost to paper, plastics and light metals.

The International Market

With respect to the international market for textile mill products, it seems entirely reasonable to anticipate a further drop in exports both in absolute and relative terms. Also, events of the past few years clearly reveal that Congress and the Administration are faced with steadily mounting pressure for regulation of imports. This does not mean, as some have evidently assumed, that we will become a "protectionist" nation. Any realistic appraisal of the international situation must reveal that we will continue to import a volume of goods. But the trend toward greater freedom of trade also appears to have been halted. We seem to be moving into an era when trading relationships will depend more and more upon negotiations. While there will be pressures from domestic industries to stem the flow of foreign goods into our market, there will be counter-pressures at work to increase this flow. These pressures cannot be quantified in any simple way, but one can try

to strike some reasonable balance after taking them into account. Thus while I have assumed a substantial increase in the physical volume of imports between now and 1970, the rate of increase—since it is measured from a higher base—will tend to decline.

There are some who might argue that the assumptions behind these projections are entirely too pessimistic from the textile industry's point of view. But I have tried to be realistic in making them rather than adopting anyone's point of view. It is unfortunately necessary to emphasize one other point. When making projections—whether long or short-term—one does not project what he wants to see happen, but what analysis leads him to expect will happen. After these assumptions and the statistical analysis have been made, what are the results?

Projection To 1970

For cotton broadwoven fabrics, the projection shows an increase from about 9.5 billion linear yards in 1957 to about 10.3 billion linear yards in 1970—a gain of almost 8%. For man-made fabrics, the increase projected is from about 2.3 billion linear yards to 2.7 billion linear yards, or a gain of 19%. For woolen and worsted fabrics, a slight decline from 288 million linear yards in 1957 to 282 million linear yards in 1970 was projected. This represents an anticipated decline of about 2.2%. Domestic consumption is expected to rise during this period, but the bulk of this increase in demand will be satisfied by shipments from abroad.

Given the relatively pessimistic assumptions regarding exports, imports and per capita consumption, one might well ask: Why do you anticipate an increase in over-all demand for domestic textile products? The answer to this is that we expect a decade of rapid economic growth in this country between now and 1970. Conservatively, population will grow by 25%. And there will be corresponding increases in income both on a total and per capita basis. These are the variables that will lead to a marked increase in the demand for textile mill products. Total domestic textile consumption is expected to increase by more than 15% as a result of the growth in population and income. Thus the long-term outlook for the domestic textile industry is for one of growth during the next decade, or a reversal of the downward trend of the 1950's.

Rapid Technological Progress

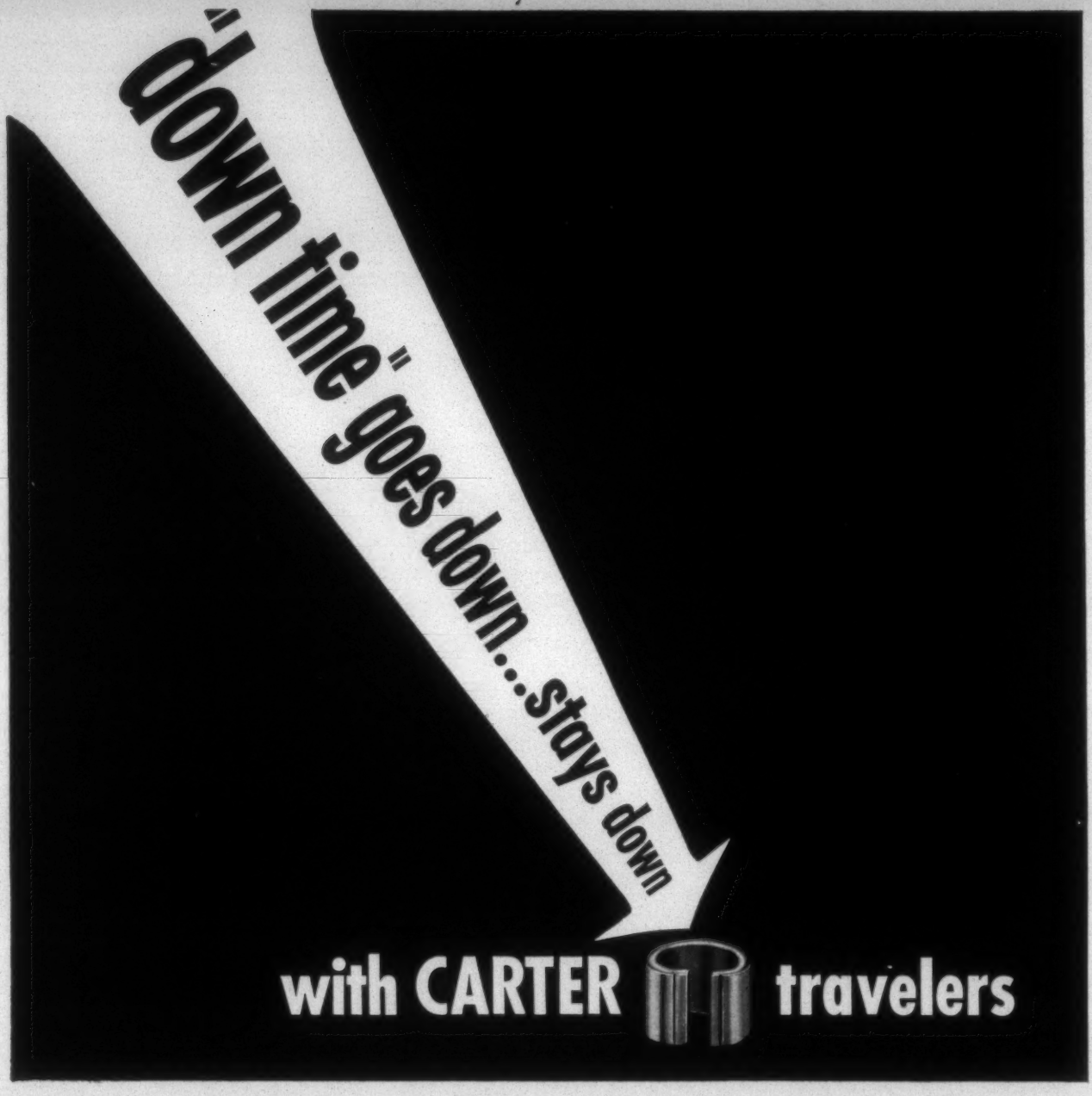
There is one important assumption underlying the long-term projections just summarized which I have reserved for discussion until the end of my presentation because it seems particularly appropriate to emphasize it at this meeting. This is the assumption that there will be rapid technological progress in the textile industry during the coming decade. I would like to stress that I do not assume any major breakthrough—such as fully automated textile operations. But there will be many important technological developments which will increase productivity, and which will lead to the development of new fabrics and constructions—some of which no one has thought of as yet.

Rapid technological change, and continuous modernization within the industry, are essential if the growth which has been projected is to be realized. In the face of growing competition from abroad, the domestic textile industry will be forced to steadily reduce its relative costs. The textile industry is one of our most labor-intensive industries, and it is lower labor costs in foreign countries which make this industry particularly vulnerable to competition from abroad. As output per worker increases, however, the labor content of each yard of cloth will diminish. While we may expect some narrowing of the gap between textile wages in other countries and the U. S. during the next ten years, it is almost certain that there will still be a substantial gap by 1970. But if during the next ten years, technological developments sharply reduce the labor content of textile production, the gap in total costs can be narrowed substantially. And this in the final analysis is what counts in international competition.

Drop In Employment

If these trends are realized it will mean, of course, a drop in domestic textile employment. On the basis of the assumptions which have been made, total textile employment in the U. S. is expected to decline by about one-fourth between now and 1970, while employment in the broadwoven segment of the industry will drop by almost one-third. We know that the sharp decline in textile production during the 1950's led to a great deal of hardship. Hopefully, however, the future decline in textile employment—which will stem largely from technological change—will be slower, and will be much less painful than the decline of the past. This will be the case if the adoption of new machinery can be geared to the normal turnover of factory labor. It cannot be entirely a painless process, but by anticipating the changes that will have to be made the industry can do much to cushion the effects of the drop in employment which is expected even if there is a moderate rise in over-all production during the coming decade.





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Vistas Of Textile Technology



By WALTER REGNERY*

INVESTORS ARE WARY TOWARD THE TEXTILE INDUSTRY HERE'S A SUGGESTED APPROACH TO BETTER EARNINGS

FROM an investment viewpoint, let's compare the textile industry with other domestic industries. I have compiled figures from "Federal Trade Consumers' Report" covering the last half of 1957 and the first half of 1958 relating profits to sales and investment to sales. Briefly, these figures show:

(1) Investment for $100 sales: Textiles $91.50; two lowest, Food at $50.90 and Leather at $57.30; two highest, Petroleum at $189.50 and Primary metal at $152.50.

(2) Per cent profit in sales: Textiles lowest at 1.40%; two highest, Petroleum at 9.14% and Chemicals at 7%.

(3) Per cent profit total investment: Textiles lowest at 1.53%; two highest, Tobacco at 7.23% and Chemicals at 5.92%.

(4) Per cent profit property and plant: Textiles lowest at 3.01%; two highest, Tobacco at 45.3% and Electrical Machinery at 12.68%.

These figures show again that textiles certainly are a poor investment in the U. S. It may be true that we could improve our situation if we were better merchants. If our sales price were increased by only 5% in the above comparison, our ranking would be changed from the bottom into the top one-third bracket of the industry ranking as to profits, returns, etc.

Let us now consider in detail our textile investment with the idea, if possible, of showing where or what department may be the poorest in relationship to getting the most for our money. Such a comparison, or examination, may well point out where we should concentrate our efforts from a machinery and plant aspect.

I have just recently been engaged in the planning of an entirely new mill. The idea here was to use the latest and best machinery from the world textile machinery market to produce goods of an average count of 16s yarn. Plans for the plant included spinning, weaving, yarn dyeing, finishing, and packaging, for both wholesale and retail sales. This plant called for an investment in plant and equipment of $105 for every $100 of sales; the total investment came to approximately $130 for $100 of sales. The increase here from $91.50 for the industry represents the difference between the price of a completely new plant and the average of the present industry.

The following is a percentage breakdown of the total investment in plant and equipment by departments:

Opening, Picking and Carding	**23.6%**
Spinning	**15.6%**
Spooling, Warping, Slashing, Drawing-in	**10.6%**
Weaving	**14.0%**
Finishing (including Yarn Dyeing)	**18.6%**
Grading and Packaging	**2.5%**
Shop	**1.6%**
Warehouses	**9.5%**
Office and Misc. Departments	**4.0%**
	100.0%

The Carding Department shows up as the department requiring the most capital. Also, I feel sure it is safe to say that this department adds the least to the value of the product as it goes through the mill. Let us look then at this investment with its various steps:

Opening	**8.8%**
Picking	**9.3%**
Carding	**61.9%**
Drawing	**20.0%**
	100.0%

These figures point up very clearly then, from an invest-

*Vice-President of Joanna Cotton Mills Co., Joanna, S. C. (See footnote, page 89)

One sure way to improve our investment picture is to get higher production per unit without changing the job load. This can be accomplished by using longer staple cotton, or by using classers' length cotton with fewer shorter fibers.

ment standpoint, that the carding operation is very costly. This should bring out forcefully that this is a very fruitful area for research and development in an effort to bring this more in line with our other processes.

From this picture, I think it is rather clear-cut that no new investor would care to come into our industry. It is also to be admitted that none of us already in textiles are too happy about any further investment we must make. You might ask, "Why are there any new investments in either new plants or large-scale modernization?" The answer here is about as follows and includes only those of us who are already in this business:

One, we must go into these further large investments, even though return is poor, to protect our already large investments; two, closely held companies want to keep money in business rather than pay it out in dividends giving the majority of the capital rewards to the government in the form of taxes.

Now, I should like to make some observations as to what might change the poor investment situation in the future. My ideas on the subject can be divided into two headings; one, improve the raw material; two, general areas for technical improvements in our processing.

Improve Raw Material

One sure way to improve our investment picture is to get higher production per unit without changing the job load. This can be accomplished with cotton by using longer staple, or by using the classers' length cotton with fewer shorter fibers.

The longer staple though will not accomplish our goal unless we can buy it without paying more premium than we save. Generally, the market premiums for staple are such that there is no net savings. Apparently, longer staple costs more to produce, and these costs are in line with established market grades. Hence, the only help we can hope for here is for the breeder to develop a long staple cotton that the farmer can produce at the same cost as a shorter cotton. If this could be done, results in this area could be worthy of notice.

Percentage Of Short Fibers

Let us look at the percentage of short fiber in cotton of the same classers' staple length. Here is an area open to two avenues of approach; one, work in the area of the cotton grower and ginner to reduce the percentage of short fibers; two, let us develop machinery that will efficiently remove these short fibers early in our cotton mill processing.

Much has been printed on many large scale mill tests to show that modern ginning practices tend to give us a poorer raw material, particularly as to spinning and weaving properties. Studies of these tests clearly indicate that the percentage of fibers less than one-half-inch in length are directly proportional to the spinning facilities. The best paper on this subject that I have seen is that of John Elting of the Kendall Co. titled "Cotton Fiber Qualities Needed by Mills." If anyone wants details on this subject, I highly recommend his reading this report. To clarify my point on short fibers, I quote from John's paper.

"With the foregoing as a backdrop, let us see what has happened to the percentage of short fibers in your cotton. Fig. 4 compares samples from the 1958 and 1959 crops. You will note that a great deterioration has taken place. On the basis that more than 10% short fibers render the quality unsuitable for mill use, approximately 47% of the 1959 crop from this valley is unacceptable.

"Where did I get this magic 10% short fiber figure? The familiar Department of Agriculture 'Joanna Mill Test' revealed that heated cottons which had been exposed to 'excessive' cleaning, contained up to 10% fibers shorter than one-half-inch. These were the worst performing cottons and represent totally unacceptable spinning quality. Experiments that we have conducted in the Kendall plants substantiate the order of magnitude. Ten per cent is a convenient and realistic criterion. (Note that this is the value determined by Fibrograph—on Suter-Webb arrays the equivalent figure is approximately 15%)."

Combined Efforts Necessary

The above clearly indicates the problem. There is some hope that the combined efforts of farmer, ginner and agriculture departments may improve harvesting and ginning practices so that in the future the decided trend in higher percentage of short fibers or poorer spinning quality cotton will be reversed. However, I do not think we should depend on this too much as there are too many factors against us in this area. I suggest that efforts be exerted by our research laboratories devoted to machinery improvements to devise methods of removing these short fibers in our early processing steps. This will have to be done cheaply and efficiently. Combing is one answer but this is too costly from a standpoint of labor, loss of longer fiber, and investment. The dividend here would be less cleaning in spinning, higher speeds, and larger job assignments due to fewer ends-down Likewise, there would be a similar saving in winding, warping, slashing and weaving.

Technical Improvements

These facts rather clearly indicate that if the cotton mill is to improve its position, the card is the place to look for help. Here we can hope to gain a much lower investment per unit of production; also, we should be able to use this process to remove the short fibers of less than one-half-inch in length.

The cotton card is essentially the same as was designed and built in the late 1800s. Certainly general technical advancements since this time should give us reason to expect much greater advancements than we have seen in this machine. Perhaps no one has really worked in this area in the past—mainly because the labor cost is low, making it rather difficult to justify a new investment as just a labor cost saving. However, with changes in our cotton, due to new

Why can't researchers come up with something new in carding? How about a carding machine to produce 100 pounds an hour!

harvesting methods, and with greatly increased building costs, we must figure our potential savings from an entirely different viewpoint.

What An Improved Card Should Do

I think it is not unreasonable for us, as textile mill operators, to expect a carding machine to produce at a rate of at least 100 pounds per hour. This machine certainly should not require any more floor space than our present card. We know that minor changes on our present machine cannot accomplish this goal; it will require an entirely new design. No doubt many of the same principles can be used but we must think of much higher rotation speeds. Why stick to such large diameters on the cylinders and doffers? This is particularly true when most researchers feel that only 10-12 flats are accomplishing 90% of the effective carding action. Why not use small diameters with greatly increased speeds? If this were the case, perhaps four to six carding units could be stacked one on top of the other, the deliveries could be simply joined together, put through our first high speed drawing process and then packaged. Such a new design would pay handsome dividends when studied in return per unit of investment.

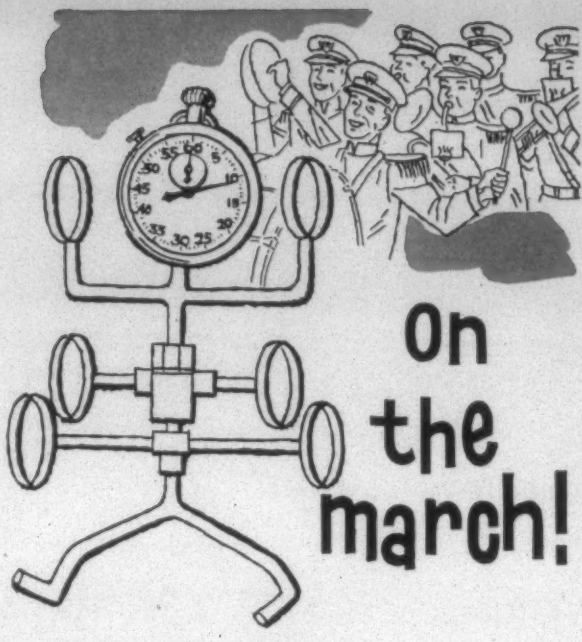
I should like to add one thought here for those who might tackle this job of a new carding machine or to some extent any new mill process. Why design your machines to last for 40-50 years? This is fine, but with our rapidly improving techniques, such a machine may well become obsolete in ten years. We as mill operators feel that this equipment should be depreciated within this time. Hence, I suggest that a shorter life be incorporated in all textile designs of machinery with the hope of reducing the initial capital cost.

If we are to effectively remove the troublesome short fibers, what better place is there to do this than in carding? We are going to no little trouble here to separate all of our fibers. Certainly a real study of air current, or the possible use of vacuum through our web, offers a wonderful answer to this problem.

Joanna Mill Test

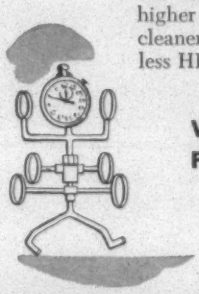
What returns can we expect from this short fiber removal? The answer here can be calculated easily from the "Joanna Mill Test." This test showed that in weaving a 39-inch 80x80 print cloth from various ginners' cotton, we had a range of direct spinning and weaving cost from 4.8 cents to 9.3 cents per pound of cloth, or a net increase of 4.5 cents. Since the only measurable difference in this cotton from the best running cotton was in the short fiber content after carding, it is fairly safe to say that should the troublesome fibers be removed, one cotton would spin as easily as another. If this were true, as is shown in labor cost study in this report, we would save 4.5 cents per pound of cloth in direct labor for spinning and weaving. Also, our end product of cloth from seemingly poorest cottons would become an acceptable finished fabric instead of a piece of second quality product. This fiber removal would cost us no more than 1.4 cents per pound of product due to loss of material. Hence, the short fiber removal would save us a total of 4.5 cents per pound labor less 1.4 cents loss of raw material or a net of 3.1 cents per pound of finished product. Such a manufacturing saving could well justify a rather

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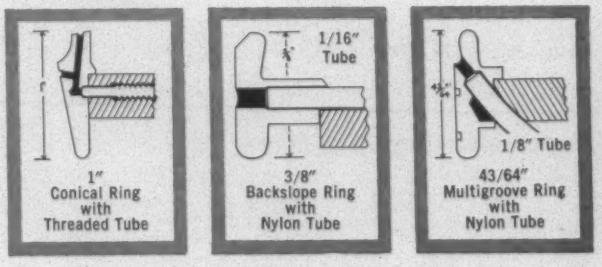
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Financing Equipment Modernization



By WALTER M. KELLY*

A TIMELY REVIEW OF WHAT MONEY LENDERS LOOK FOR IN CONSIDERING LOAN APPLICATIONS

I WOULD like to discuss with you the factors that justify plant modernization and the component parts of a successful program; and more specifically, what any lender wants to know before he is willing to provide funds. In other words, what benefits will the mill obtain through modernization which justify the risk inherent in any sizable expense program.

Let me mention some of the information lenders want, and although it may be A B C's to all of you, if you have a check list of this nature, and can satisfactorily answer these questions, you will have created a favorable atmosphere for financing your program.

The major points covered will be

(A) What is your program?
(B) What will the program accomplish?
(C) Is it economically feasible?
(D) When is a modernization program not feasible?
(E) Summation

(A) What Is Your Program?

(1) Is it partial improvement of existing equipment?

This is a relatively simple program and is usually limited in nature. An example would be the installation of new coilers and larger cans in the card room. Because it is limited in scope, production interruptions can be kept to a minimum. Thus sales and profits should not be affected materially during the changeover.

(2) Does it involve complete renovation of old equipment on the floor or at a point distant from the mill?

This is a more complex program—one which involves careful planning to keep loss of production and profits to a minimum. I refer specifically to an extensive modernization of existing spinning frames.

(3) Does the modernization program affect more than one department?

Let's assume the program includes coilers and large cans, high-speed drawing equipment, new, large-package roving frames and new spinning frames. Now the work interruption can have a serious effect on profits if any one phase of the program gets off schedule.

We usually recommend that such a program be split into several projects even though the figures prove that greater profits can be earned if it is all done at the same time. Our experience shows that programs of this magnitude are difficult to co-ordinate. If one manufacturer falls down on delivery or erection schedule, production is seriously interrupted and losses will occur. Even more important, old and valued customers can be lost if you can't deliver in time to meet their cutting schedules.

(B) What Will The Program Accomplish?

(1) Will it reduce costs, and what costs?

(a) Labor Costs—Can be reduced by bringing a mill into better balance to eliminate overtime or through a reduction in man-hours per pounds produced. For example, a reduction in the doffing cycle in the card room—or an increase in the pounds doffer per man-hour in spinning. As all mills will be faced with increasing wage rates, this type of modernization program should be at the top of the hit parade. A recent program we are familiar with estimates a reduction in direct labor costs of four cents per pound, or $400,000 per annum.

(b) Material Costs—Recently I inspected a new long drafting system (Cole by name) which claims that because of its unique direct positive weighting feature on all top rolls, there is better control of the roving to the front roll, and as a result, better utilization of fibers. The manufacturers claim a 6% saving in raw materials will result without impairing quality.

Material costs, or the cost of financing inventories, can also be reduced by consolidating plant facilities. We estimate that one of our clients will reduce his investment in inventory by $300,000 by consolidation of facilities.

(c) Overhead or Supervisory Costs—It is axiomatic that these costs can be reduced by plant consolidation (fewer

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(See footnote, page 89)



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One of the best ways to turn up troubles you didn't know you had is to go looking for a loan. Any amount will do.

people) or by an increase in volume which reduces per pound cost.

(2) Improve or Maintain Quality

(a) Improve Quality—If your seconds are excessive, profits can be affected adversely through lower average selling prices and lost customers. Poor quality yarn might make it impossible to weave constructions the market wants.

Two examples will illustrate what I mean. Assume a cotton mill has a capacity of 10 million pounds—with 25% seconds—and seconds sell at 4 cents below the market. Sales are reduced $100,000. A reduction of 50% in seconds increases gross profits by $50,000.

(b) Maintain Quality—A second example is where the objective is to maintain quality, yet reduce raw material costs. Improved long draft spinning equipment has enabled one mill to use shorter staple cotton and mix in as much as 25% card strips, and still meet recognized quality standards.

(C) Is It Economically Feasible?

(1) Are profit prognostications realistic?—Unless funds are currently available, they must be obtained from outside sources. These sources want to know how and when profits will amortize the loan; and furthermore, whether these profits are realistic.

Are they based on present market prices? If so, are these prices higher or lower than the averages for the past five years? Are they based on a reduction in labor costs and *do independent engineers agree with estimates prepared by the mill?* Does the mill have an up-to-date standard cost system which will immediately reflect any deviations from the over-all plan, and pinpoint it by type of fabric? We highly recommend a fixed and variable cost system to measure the profitability by constructions, or by markets.

If your cost system meets these specifications and if your profit estimates are verified by recognized independent engineers, the lender can proceed with greater confidence.

A word of advice. *First*—Analyze carefully the equipment that would give you an ideal mill, and then plan a priority against each expenditure, giving highest priority to that equipment which will pay for itself in less than two years. We recently turned down a mill where the payout was in excess of ten years.

Second—In the fast moving equipment market in which we find ourselves today, a deferred purchase one year may next year represent a better payout because of technological advances.

(2) Is it financially feasible?

(a) First, will total debt be in line with equity interest?

Even if we assume that the collateral value of the machinery and equipment are sufficient to liquidate a loan, we have a definite responsibility to advise management not to incur a debt which could imperil their own investment. In our opinion the ratio of debt to equity should not exceed 2-to-1.

(b) Can it be repaid without seriously affecting working capital under adverse conditions?

Farsighted mills have pursued a policy of reinvesting a good portion of their depreciation in new equipment every year, providing a payout can be realized on the investment in a relatively short period of time. Utilization of depreciation money for debt reduction is equally sound. In other words, if a mill can break even on operations after depreciation, and still provide enough dollars from depreciation to amortize its debt over a three or five-year basis, it is on sound ground. To impress upon our clients the importance of working capital, all term loan agreements specify the minimum amount of working capital a mill must have.

(c) What collateral values do you need?

If the mill is in excellent financial condition, with a record of consistent profits over a period of years, funds may be available on an unsecured basis. However, if, as more often is the case, the lender must depend upon the collateral values in the event of liquidation he will probably: (1) Require an independent appraisal on all fixed assets. (2) Instruct the appraiser to set the appraisal value not on replacement or insurable value, but on a "quick sale" value. By "quick sale" value we mean the value that can be realized within a period not to exceed six months after liquidation proceedings commence. (3) Loan approximately 60% of the quick sale value. In doing so, theoretically the value of the equipment should always be in excess of the quick sale value—particularly if amortization is made at the rate of 20% per annum.

(D) When Is A Modernization Program Not Feasible?

(1) For financial reasons—Insufficient working capital or proper relationship of equity to debt stop many opium smokers from pursuing further their fantastic dreams. And if the return on the new investment is out of line with recognized standards the program should not go forward.

(2) For labor reasons—An unfavorable labor market may make it impossible to compete for competent labor. Many plants manufacturing other than textile products, who have a higher wage scale, have moved South and drained off the cream of the crop.

Recently I visited a yarn mill faced with that problem. Its youngest supervisor was 55 and there were no replacements in sight, even when bonuses were offered. While new equipment was needed badly, it couldn't solve the manpower problem. To survive this plant had to move to a predominantly textile area.

In another mill, the labor supply available was not sufficient to put on a third shift. Why spend good dollars which will only give a return of two-thirds when your competitor gets 100%?

(E) Summation

In conclusion

(1) Your program must be well conceived. By this I mean a complete appraisal must be made of all your needs and a priority established for each need.

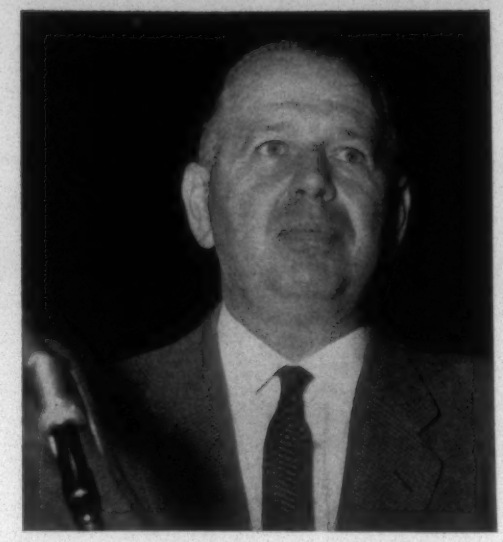
(2) Your goals must be known and understood by all key personnel.

(3) Objectives must be realistic.

(4) In line with this, please remember any sound equip-

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A Marketing Man's Outlook On Machine Modernization



By C. W. BENDIGO*

DON'T PLUNGE RECKLESSLY INTO MODERNIZING WITHOUT FIRST FINDING OUT WHAT YOUR MARKET PROSPECTS ARE

SINCE the last Atlantic City textile machinery show six years ago, major changes have been taking place in the marketing of textiles. One of the most important has been the establishment of textile marketing departments in many firms, a fact that lends weight to the belief that to an increasing degree what can be sold at a profit will become more important than what a mill happens to be set up to produce.

Mill consolidations and mergers have, in a good many instances, proved beneficial; and we see that as a continuing trend toward larger and more diversified textile combinations. We generally look at integration and combinations as giving technical advantages but, more often than not, the marketing advantages are greater.

In the U. S. and Canada a pattern is developing that gets some of the benefits of integration in marketing without integration of facilities. It is the assistance given by a seller to help his customer (or even his customer's customer) sell goods. We see it especially in the work of the textile chemical and man-made fiber producers but also, to a lesser degree, by the machinery manufacturers. No one can ignore the fact that you must help your customer to sell. You can't say, "Here is what I have; see what you can do with it."

An Economy Of Affluence

Many recognize that the U. S. economy has long since passed from the era of production for need to what is sometimes described as an economy of "affluence." Not as many, however, have recognized that in such an economy the lowering of costs and prices does not necessarily increase a market. It is important to understand that more and more products are bought for reasons other than need or a lower price. These reasons may be personal satisfaction based on pride or frankly possessiveness. We see it every day in examples of what are called "conspicuous consumption." We have always had such consumption to a degree but never anywhere in the world to the extent that is true in the U. S.

In the case of women's clothing, we not only have our best examples of desire being more important than need, but also of higher-priced articles replacing cheaper ones. An outstanding example has been nylon underwear replacing acetate and rayon. Another is the fact that more medium and high-priced sweaters are sold than cheap ones.

Two Price Levels

In the case of clothing textiles, we see other important paradoxes, such as worsted fabrics of equal quality selling at two price levels. These three strange phenomena—high-priced underwear replacing low; medium and high-priced sweaters outselling cheap ones; and virtually identical fabrics regularly selling at two price levels—are manifestations of the new era in which we are doing business.

Even in the case of industrial fabrics, we often find a higher-priced product being preferred to an identical lower-priced one. Here, more often than not, the reason is technical assistance or some other service that is more important than the difference in price.

I make the foregoing points to try to counteract the widely held belief that lower prices automatically broaden a market. We now know that many times lower prices do not and may even virtually destroy a market.

Another erroneous, widely-held belief is that a new, improved, and high-quality product will surely find a ready market. These two concepts are not valid because they make assumptions of facts that may not exist. Perhaps I can best illustrate what I am trying to convey to you by giving timely examples.

One textile company president stated in recent months he was sure his company would succeed because his was a quality firm and quality always wins out in the end. At almost the same time, another company president in the same field said he would always do well because he would produce cheaper and sell cheaper.

Both companies had a poor first quarter and will have an

*Director of Marketing, Werner Textile Consultants, New York, N. Y. (See footnote, page 89)

To an increasing degree what can be sold at a profit will be more important than what a mill happens to be set up to produce.

even worse second quarter largely because neither company has anything like an adequate marketing organization and program and are producing large quantities of products for a rapidly declining market.

How can we make a profit in a declining market? Perhaps Dr. J. L. Bitter, vice-president of marketing for American Enka, has some of the answer: "I think we will see more selective merchandising: that is, confinement and policing of product innovations in such a manner that the integrity and prices of the end products are protected."

The textile industry is also faced with the question of how can one standardized product be differentiated from another. The same question faces producers of salt, bread, milk, gasoline and many other products. Back in 1912, faced by this situation, the Morton Salt Co. tried to develop ways to differentiate its product. In those days, salt was sold in bags at about five cents, and there was no discernible difference between salts. Morton research discovered that if a little baking powder was added to the salt it would flow freely even in wet weather. Morton then packaged its product in a fancy pack and offered it for ten cents. It sold. How long did this product differentiation last? It wasn't long before another salt manufacturer added baking powder. But, the results show that Morton has been able to stay ahead by offering something better first and commanding the respect of consumers and by better packaging and clever marketing.

Other manufacturers of components have been successful with their marketing program and are well known to you. I refer to such components as Arnel, Acrilan, Dacron and other fibers; Milium and Permel finishes; Pellon interlinings; Bondyne, Botany, and other fabrics. The only basic differences between marketing components and end products is in the marketing mix; that is, the emphasis given to each of the six marketing functions.

The Importance Of Machinery

Thus far no reference has been made to the machinery and technology involved in a successful textile marketing program. These elements cannot be divorced as will become evident from the following three examples. One or another of these case histories may come close to situations you have faced or may face in the future.

Case No. 1 involves a cotton mill that had a sales volume of just under $10 million a year and was losing money while its competitors were showing profits. Its owners were considering the purchase of considerable new equipment in order to make the operation profitable. We were called in to survey the operation, check on the suitability of the equipment under consideration, determine its probable payout, and ascertain if the new machinery would change the losses to profits.

Our technical people found that new machinery was certainly needed and that an investment of just over $400,000 might save $300,000 a year. Unquestionably such a return is very good. However, our cost men found that the savings would not offset losses altogether. Concurrently, our marketing men were investigating the products and selling effort. We found that this company's goods were selling in a declining market, and the equipment under consideration could handle a new type of goods for which a sizeable, profitable market existed. It became necessary, therefore, to develop a new product line and change the current method of selling from one of direct selling to a marketing organization staffed with people experienced in selling and servicing these new markets. As a result, this mill had a more diversified, profitable line and avoided the situation I shall describe in Case No. 2.

Case No. 2 involves an integrated cotton mill with sales of $4 million a year which could not make payments on a million dollars worth of new machinery it had bought. Financing was through a bank but with substantial recourse to the machinery companies that supplied the equipment. When payments were defaulted, Wernertex was engaged to appraise the entire operation and determine why, despite the new machines, the operation was running at a loss during a period when competitors were showing substantial profits.

It did not take long to establish that the mill equipment was excellent although the cost system was inadequate. But, more important, the selling organization and management were demonstrably deficient, and only continued losses could be expected indefinitely. We determined that the property could not be sold for the amount owed to the bank.

We investigated the various markets the company was selling in terms of size, share of market, profitability, sales effort, sales method and sales cost. Out of this study came market facts and figures on which an effective marketing organization could be built.

In this instance, a million dollars' worth of good equipment was kept off the second-hand market; and, we feel sure, the way was paved for the payment of the machinery.

An Ideal Example

Case No. 3 is an almost ideal example of how to go into a new venture. It is not often that the ideal occurs in real life; but here it did for all practical purposes. A very important textile manufacturer wanted to integrate forward from yarn to a pile fabric which appeared to have a good future. Before seriously considering going into the venture, he had the foresight to make a market study. His hunch proved to be a good one, and we went on to give an order-of-magnitude estimate of the cost of the additional facility and an expected profit-and-loss calculation.

The estimate ran into over a million dollars but the profit and loss calculations on a conservative basis showed a net return before taxes of 20%, which you know is good for textiles. We then re-checked the market potential with the sales quota to reach the profitability stated. The potential was there. We further checked the development and introductory costs as well as the cost estimate for the proposed marketing mix. Here we found the budget might be adequate after the product was launched but for the initial years would have to be doubled. This doubling did not seriously affect the per cent return.

Fortified by facts in both manufacturing and marketing, our client ordered the equipment needed and immediately went to work setting up his marketing organization. The

(Continued on Page 134)

An S.R.R.L. Report On The Variability In Elongation-At-Break Of Cotton Yarns

THE ELONGATION-AT-BREAK OF COTTON FIBERS AFFECTS BOTH YARN PROPERTIES AND SPINNING EFFICIENCY

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Southern Regional Research Laboratories[1]
New Orleans, La.

THE elongation-at-break of bundles of cotton fibers is being increasingly recognized as an important factor affecting the properties of yarns and spinning efficiency (see references 2, 4, 5, 6, 10 at end of text) of cottons. The elongation-at-break of single fibers, fiber bundles and single yarns will henceforth be referred to as "elongation." Since differences in fiber elongation of as much as 50% exist among commercial cottons (3), this fiber property may be extremely important in determining its optimum end use, particularly since a direct relationship between fiber and yarn elongation has been reported (2, 10).

The effect of the variability in elongation of single cotton fibers on yarn strength has been reported (10). Another investigator (8) reported limited evidence that variability in elongation of yarns affects processing performance. This implies that fiber and yarn elongation variabilities are related. It is, therefore, pertinent to study further the relationships which exist between yarn elongation variability, *per se* and yarn properties.

It is admitted that factors such as amounts and variation in twist, variation in fiber length distribution, number of fibers in yarn cross-section and fiber surface friction characteristics may influence the variability of yarn elongation. However, the purpose of this paper is merely to relate variability of yarn elongation to other pertinent yarn properties. The variability in yarn properties will henceforth be designated as C.V. of the particular property being discussed.

Samples

Yarns ranging in size from 15/1 (40 tex) to 72/1 (8 tex) involving 48 samples from 15 different varieties of cottons were used in this study. The data are presented with the admission that the yarns were not randomly selected to represent all yarns, but were taken as a matter of convenience by random selection from yarn data available at the S.R.R.L.

Testing Procedure

The Uster Automatic Yarn Strength Tester[2] was used to measure yarn elongation and single yarn strength. Each elongation and strength value for 60/1 and coarser yarns is based on 140 breaks—20 from each of seven bobbins, and for yarns finer than 60/1, on 200 breaks—20 from each of 10 bobbins. The instrument records each consecutive breaking load and elongation as a bar, the lengths of which provide measures of the magnitude of the determinations.

In addition, strength determinations are automatically arranged in a frequency distribution diagram from which the standard deviation can be quickly estimated with the aid of a special ruler. Such a distribution is not provided, however, for the elongation determinations. Standard deviations of elongations were, therefore, computed in the conventional manner after reading each of the 140 or 200 elongation measurements from the diagrams for the 48 lots of cotton and then grouping into frequency classes. The number of groupings or cells tended to be fewer than recommended by A.S.T.M. (1), but this is not regarded as seriously invalidating the results.

Since reading each individual elongation from the chart was tedious and time-consuming, a shorter method using a template was also used on the data from these 48 lots and considered as a possible substitute for use for additional computations in this and other investigations. Basically the template method was the same as that used for estimating single strand strength from the frequency distribution provided. However, since the instrument does not automatically provide a frequency distribution of elongations-at-break, the number of high and low determinations falling in each tail at the 95% probability level were counted on the bar diagram. The remaining distance, between the inner limits of the diagram, was then measured with a set of scales on a round perspex disc (Uster No. 272.194 E) (9) which permits quick estimation of the standard deviation and coefficient of variation. The elongation C.V. values obtained by the direct method were used for relating yarn elongation C.V. with other yarn properties.

Discussion Of Results

Relationship Between the C.V.'s of Single Yarn Elongation and Single Yarn Strength: Fig. 1 indicates that single yarn elongation C.V. varies directly with single yarn strength C.V. and that strength C.V. is greater than elongation C.V. It is interesting to note that the phenomenon of greater strength variation than elongation variation found in cotton fibers (3) also holds true after the fibers are spun into yarns. The coefficient of correlation between elongation C.V. and strength C.V. was found to be 0.85, indicating that though these two properties are highly correlated there is still a sizeable proportion of the variability in yarn elongation which cannot be accounted for by the C.V. values of single yarn strength. Consequently, the relationship is considered hardly close enough to substitute single yarn strength

1. One of the laboratories of the Southern Utilization Research and Development Division, Agricultural Research Service, U. S. Department of Agriculture.
2. The mention of tradenames does not imply their endorsement by the Department of Agriculture over similar products not mentioned.

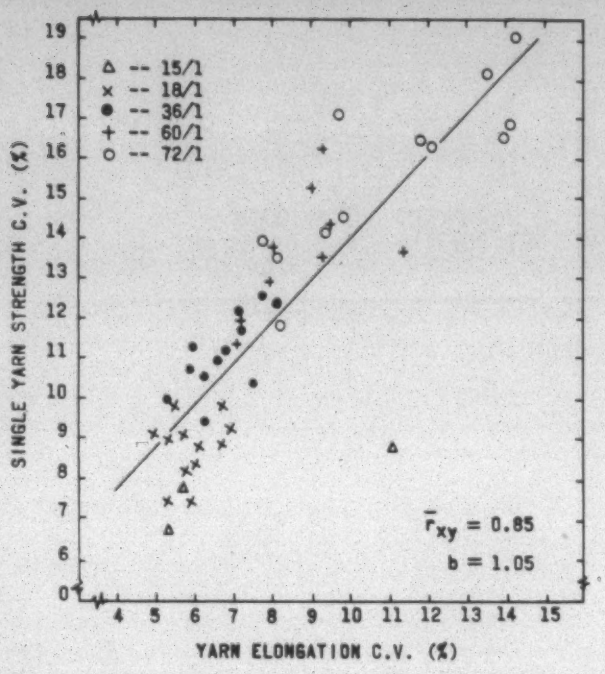


Fig. 1—Relationship between the C.V.'s of single yarn elongation and single yarn strength.

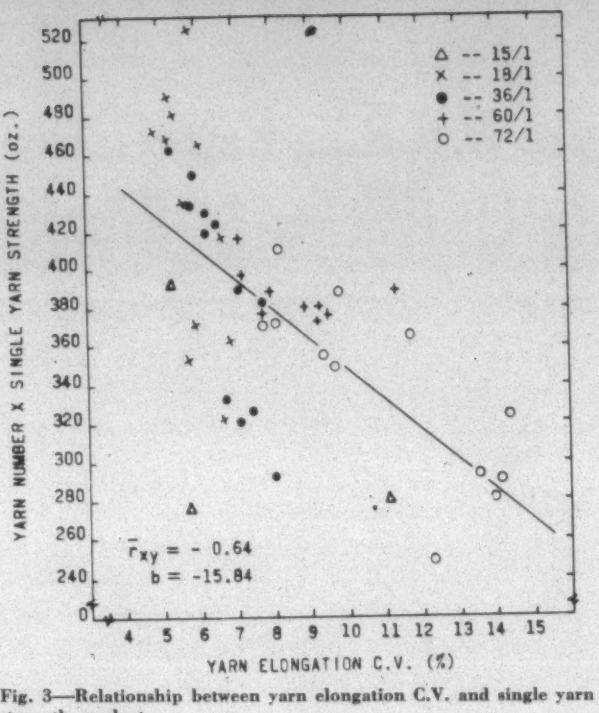


Fig. 3—Relationship between yarn elongation C.V. and single yarn strength product.

C.V. for yarn elongation C.V. in evaluating either yarn quality or processing efficiency.

Relationship Between Yarn Elongation C.V. and Yarn Elongation: Fig. 2 shows that the coefficient of correlation between yarn elongation C.V. and yarn elongation is —0.75 and the negative slope indicates that yarn elongation variability is inversely proportional to yarn elongation. It should be noted that the range of yarn elongation C.V. values for the finer yarn numbers is wider than for the coarser yarns. This suggests the postulation that yarn elongation variability is influenced by yarn size uniformity as well as elongation since coarser yarns are known to be relatively more uniform in size and higher in elongation than the finer yarns.

Relationship Between Yarn Elongation C.V. and Single Yarn Strength Product (Yarn Number x Strength): Fig. 3 shows that the relationship between yarn elongation C.V. and single yarn strength product is rather poor (coefficient of correlation of —0.64). This means that only about 41% of the yarn strength is explained by the variability in yarn elongation.

Relationship Between Yarn Elongation C.V. and Yarn Toughness Index: The relationship between yarn elongation and yarn toughness index (half the product of yarn tenacity and percent elongation) (7) is curvilinear, but becomes linear when the values are plotted on logarithm scale, as shown in Fig. 4 and has a coefficient of correlation of —0.78. This indicates that yarns which are more uniform in elongation possess greater ability to withstand work in processing.

Comparison Between Two Methods for Obtaining the

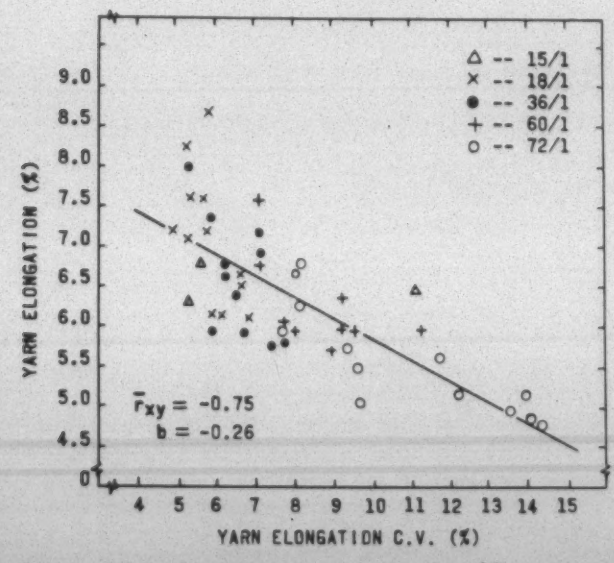


Fig. 2—Relationship between yarn elongation C.V. and yarn elongation.

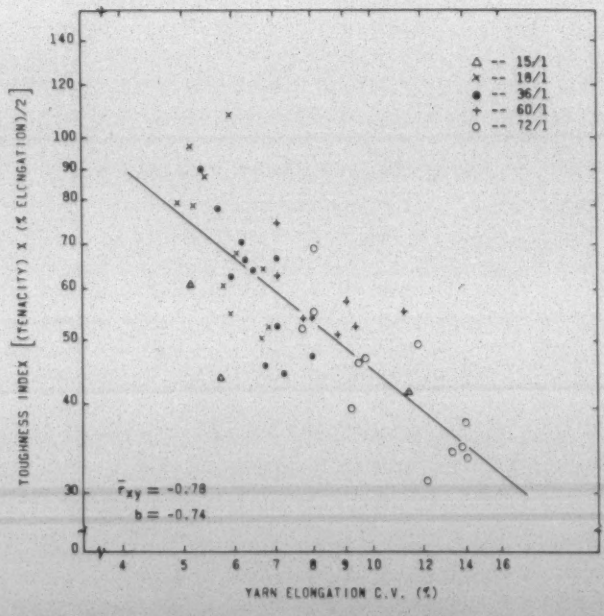


Fig. 4—Relationship between yarn elongation C.V. and yarn toughness index.

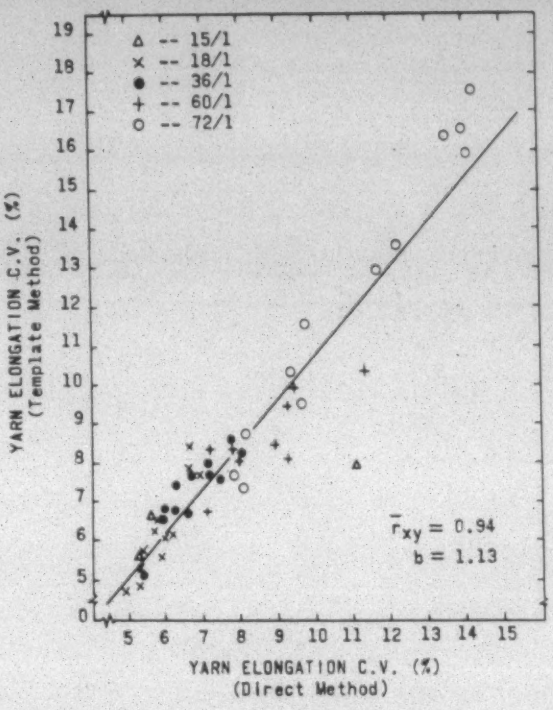


Fig. 5—Comparison between yarn elongation C.V.'s obtained by the direct and the template method.

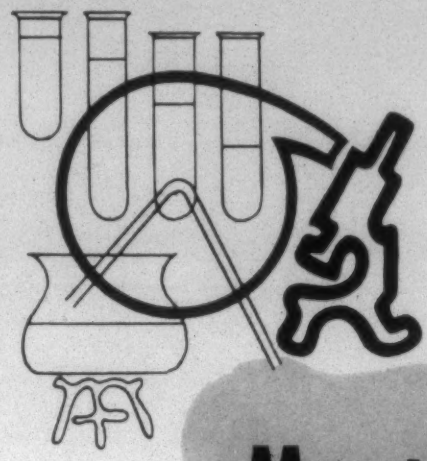
C.V. of Yarn Elongation: Fig. 5 shows the comparison of yarn elongation C.V.'s as obtained by the direct method and the template method. On the average, the template method yielded greater C.V. values than the direct method. It also indicated that the template method applied very well for the medium yarns but yielded greater differences on the coarse and fine yarns as evidenced by the varying dispersions around the regression line of the values for different yarn sizes.

The frequency distribution curves as obtained by the direct method (data not shown) were examined for departure from normality. These curves tended to peak considerably higher than the normal distribution curve and to be negatively skewed. It appears that distributions with more cells gave better agreement between the direct and template methods. However, the over-all correlation coefficient of 0.94 is considered good.

Conclusion

The finding of this exploratory investigation indicates that variability in yarn strength cannot be used in place of yarn elongation variability and that variability in yarn elongation should be considered as another index of processing efficiency. These findings indicate that knitting efficiency may be more dependent on the variability in yarn elongation than on strength of the yarns. Although no substantiating data are available, it is also postulated that one of the main causes of end breakage in spinning is due largely to variations in elongation rather than non-uniformity in yarn strength because of the reasonably good correlation between yarn elongation variability and yarn toughness index.

Also, fiber and yarn elongations may depend upon their uniformity within samples as well as upon the magnitude of their elongations. The findings of this exploratory investigation also indicate the need for determining the effect of the variability in elongation of yarns on processing



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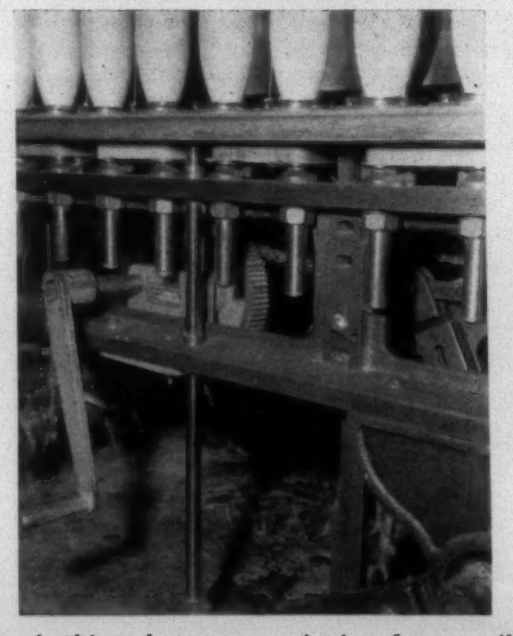
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efficiency. This investigation further suggests the need for more rapid methods of determining the variability of yarn elongation through the use of auxiliary automating accessories to existing instruments.

It is hoped that the findings of this exploratory investigation will induce further investigation on this subject.

ACKNOWLEDMENT

The authors wish to express special gratitude to Lorraine Leitz and Audrey Castillon for their patience in obtaining the yarn elongation C.V.'s by both the direct and template methods.

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1960 Textile Machinery Sales May Top 1959 Totals By 17-20%

Capital expenditures for textile machinery in 1960 are expected to exceed the estimated 1959 total of $400 million by 17-20%, according to the Business and Defense Services Administration, U. S. Department of Commerce. A final figure approaching the record $499 million of 1951 is possible.

Machinery shipments in the first half of 1960 reportedly exceeded the same period of 1959 by more than 25%. Estimates for the last half of the year indicate a continuation of the high rate of operations, although progress will likely be more moderate due to gains made during the last half of 1959 and the first half of 1960. Foreign trade in textile machinery, based on first quarter shipments, continues favorably at almost a record rate.

Vistas Of Textile Technology

(Continued from Page 95)

large machinery investment. Also, it would put cotton in a much better competitive position due to an improved end product.

We must never relax our efforts in the area of trying to improve our position by improved marketing. However, the long-neglected area of the cotton card demands real investigation and has great potential for giving the cotton textile manufacturer help in making his investment pay better dividends in the future.

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The Loomfixer And His Job

Part Twenty-One

HOW TO CUT WIDE TERRY FABRICS FOR USE AS TOWELS AND FACE CLOTHS

By WILMER WESTBROOK

TERRY fabrics are used for a wide variety of purposes, including clothing. However, some of the more basic terry-fabric products for home use are:

(1) The normal-size bath towel, about 20 to 24 inches wide and 36 to 48 inches long, with hemmed ends.

(2) The guest towel, about 16 inches wide and 28 inches long, with hemmed ends.

(3) The finger-tip towel, about 11 to 22 inches wide and 18 to 20 inches long, with a fringe about ¾ to one inch long at each end.

(4) The face cloth, about 11 to 12 inches square, all four sides finished by overedging with a three-needle sewing machine that forms an overlocking stitch.

The end uses of terry fabrics often require narrow widths, but it is more economical to weave the cloth on 40 to 50-inch looms. The cloth is usually woven with one or two inner selvages, and two or three widths of toweling are woven side-by-side and then split.

All types of home-use terry fabrics are subjected to rough usage and frequent laundering. The selvages and hemmed edges must be very strong to prevent tearing and unraveling. Doups or leno weave for inner selvages is not satisfactory for towels because such selvages are weak.

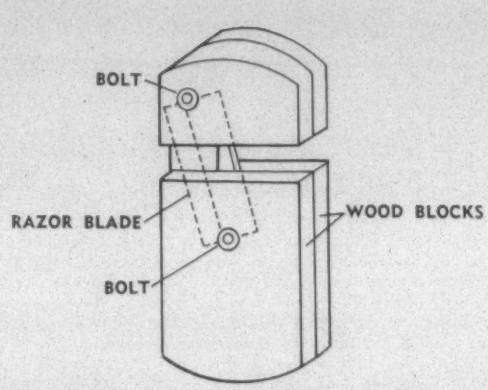
The best way of weaving inner selvages for terry towels is to use 24 to 36 ground warp ends drawn one end per heddle eye and two ends per reed dent. Three reed dents are left open to provide a cutting line, and the next selvage is drawn like the first. Twenty-four ends are sufficient for this type of inner selvage if the towel is to be finished by overedging. If a hemmed finish is required, about 36 ends will be needed to form a selvage wide enough for hemming.

The system of bleaching or dyeing has an influence on where, when and how the two or three widths of woven terry fabrics are separated. If the yarn is bleached or dyed and the cloth is sold direct from the loom, it is better to separate the cloth at the loom.

If the cloth is to be bleached or dyed after weaving, it is better to wait and do the splitting after the finishing processes have been completed. If the terry fabric is to be overedged on all four sides, all washing, bleaching, dyeing, and drying must be completed before separation takes place.

Fingertip towels can be separated at the loom during weaving without trouble and the cut inner selvages hemmed in full 120-yard lengths. However, the finishing department does not like this method because it doubles the length of cloth that must be handled. For the wider guest and bath towels, there is usually no trouble. All departments can handle the 16 to 24-inch widths economically, and it is better to separate the widths at the loom.

It can be seen that a study should be made and the splitting of terry fabrics done when and where it is most advantageous for all departments concerned.



The cutter is made of two wood blocks bolted together with a razor blade insert.

Cost is also to be considered in splitting terry fabrics. Splitting the cloth costs nothing when done at the loom; but if it is done after finishing, it can become a costly and complicated process. The cost of hemming or overedging is the same. In addition to the cost element, better and straighter cutting can be done at the loom because the cloth is uniformly stretched between the temples. After finishing, elaborate machinery is necessary to spread and hold the cloth for accurate cutting.

Machine cutting of terry fabrics can be done with a rotary knife mounted on a table. A neat, precise cut can be made by this method; but if the cloth is woven in three widths, the cloth must be run back over the table for a second time because only one cut can be made at a time. The cloth is pulled and guided across the table by hand and an experienced operator can split about 25 yards per minute.

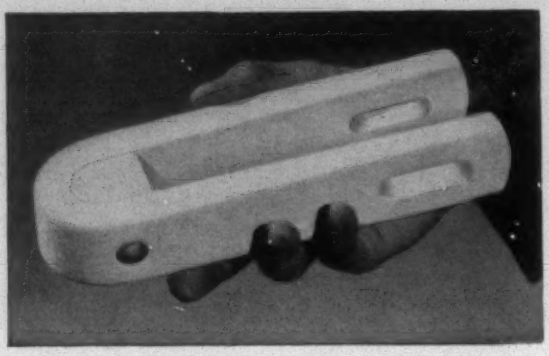
Machines have been made to cut terry cloth, but some of the difficulties encountered are:

(1) To guide the cloth in a true line as it travels



The shop-made terry cloth cutter floats on the cloth and severs the filling ends between the inner selvages as the cloth passes over the take-up roll.

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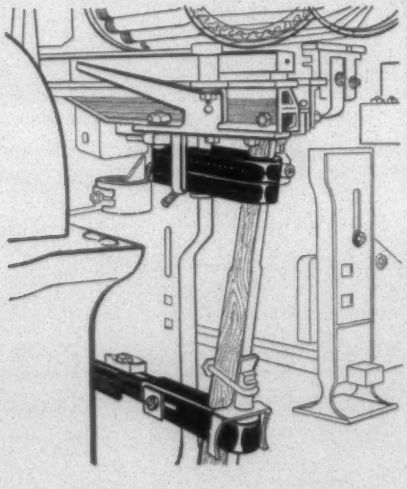
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(2) To remove the two or three separated cloths evenly and quickly when cut.

(3) To keep the cloth horizontally straight when starting up a new length.

(4) To draw the cloth along at an even tension across the width of the cloth.

Unless narrow widths of fabric are impractical or cannot be handled in finishing operations, it is always best to split the terry cloth at the loom. Many devices have been developed to cut cloth while it is being woven, but one of the most practical cutters can be easily made in the mill shop. The cutter is a razor blade mounted in two wood blocks bolted together (see sketch).

In operation, the cutter is placed in position in the open strip between selvages with the cutting edge facing the fell of the cloth. For XD and other looms that have a breast beam above or behind the take-up roll, it is not necessary to attach the cutter to the loom. The back of the cutter will rest against the breast beam and the slots will hold it on the cloth where it will float and split the cloth precisely between the inner selvages.

Financing Modernization

(Continued from Page 106)

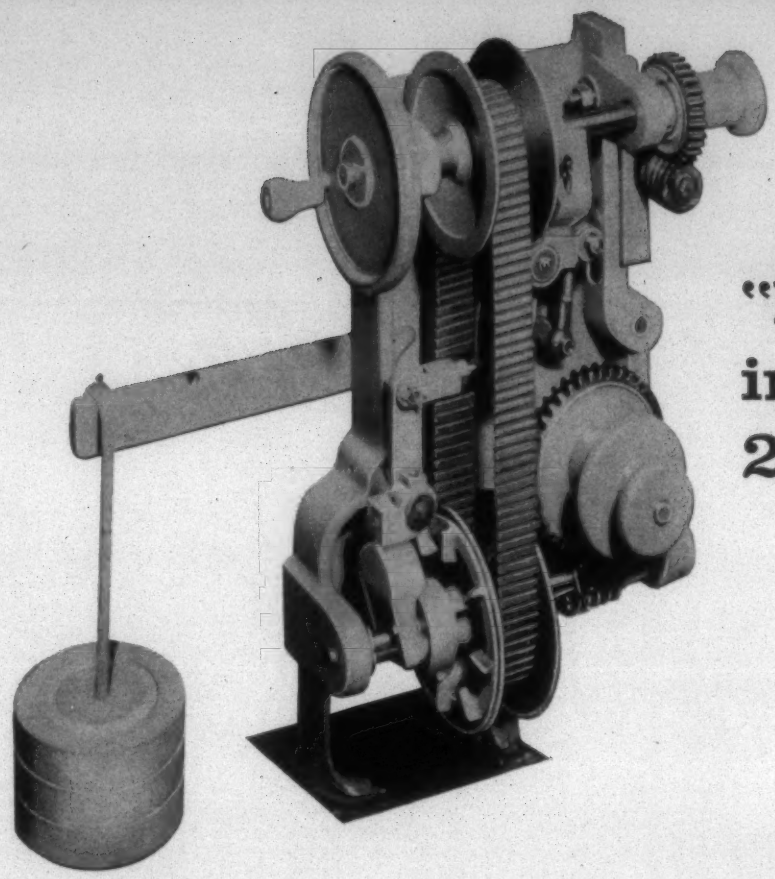
ment program must be based on: (a) A merchandising program designed to get the right products to the right market at the right time. Right Products—In the denim field we have seen the emergence of vat dyed materials. Mills without this equipment were seriously handicapped and had to install it immediately. The demand for wash-and-wear is another example. Right Markets—Every company must examine its sales performance by type of end use by geographical area to determine where its best profit opportunities exist now and for the years that lie ahead. Right Time — Late deliveries mean cancellations. Thus, proper production planning is necessary not only to insure prompt deliveries, but also to keep inventories in balance with sales. The Arthur Anderson report given before the A.C.M.I. in 1959 should be your bible. (T.B., April '59, Page 39) (b) Producing your products on a competitive basis with respect to quality and price. There is no sense in producing a Cadillac if the market wants a Ford.

(5) You must be able to repay the debt incurred without seriously affecting working capital, the life-line of your continuing existence.

New Classes Started September 1 At N. C. Vocational Textile School

New classes at the North Carolina Vocational Textile School, Belmont, N. C., began September 1 in all courses. Courses include: yarn manufacturing, weaving and designing, and mill maintenance. The programs at the school are classified for either pre-employment training or for supplementary training.

The school announced that construction has begun on a new 61x36-foot two-story addition. The first floor of the new addition will provide additional space for the mill maintenance course. The second floor will be used for an auditorium and will release the present assembly room for cotton fiber testing and training in the yarn manufacturing course.



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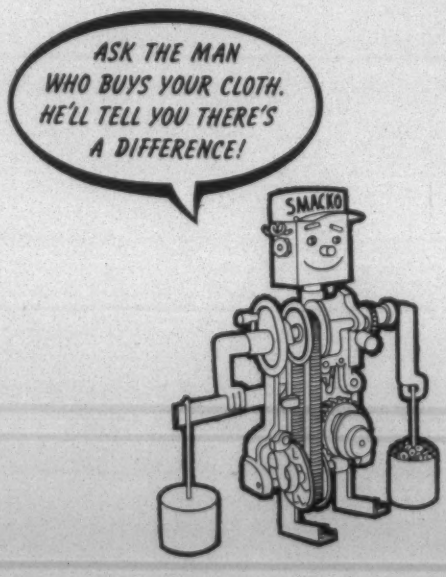
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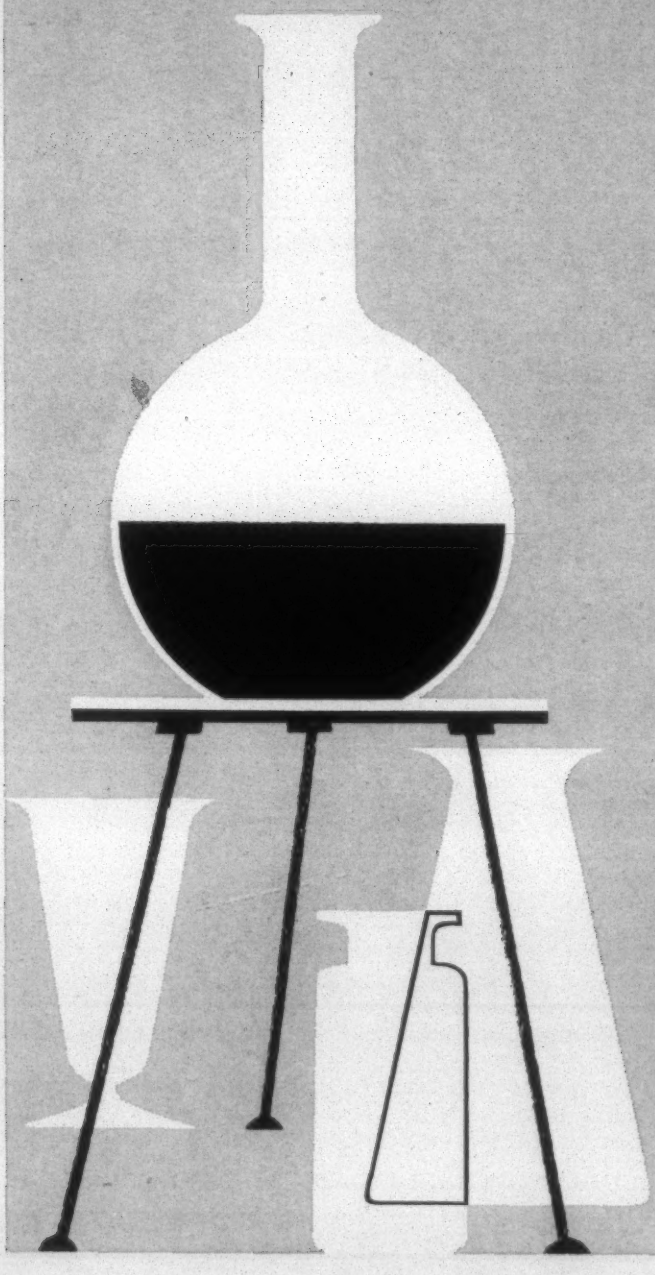
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The Designing Of Pile Fabrics

By E. B. BERRY

THE WEAVING OF TERRY FABRICS NECESSITATES THE USE OF SPECIAL EQUIPMENT AND TECHNIQUES

Chapter 10

Terry

THE Callaway Textile Dictionary defines terry as follows: *Terry Cloth*—"A medium to heavyweight cotton fabric with a loop pile on one or both sides. The loops may cover the entire surface or form stripes, checks, patterns, etc. Two warps are used: One to form the pile loops and the other to interlace with the filling to form the ground. One of the main features of terry cloth is its ability to absorb moisture. Used for towels, wash cloths, bath mats, etc. Also called Turkish toweling."

Terry Weaves—"A group of warp pile weaves which form loops on one or both sides of the cloth, and which require two warp beams, the ends commonly arranged 1 ground—1 pile or 1 ground—2 pile. Formation of the loops requires a special let-off motion and a loose reed. The basic weave repeats on three picks, on the first two of which the reed is loose; on the third pick the reed is made fast and the pile beam is slackened, thus forming a row of loops across the cloth. The ground ends interlace with the filling to give a firm foundation. Used for terry cloth, turkish towels, etc."

Fig. 49 illustrates the weave, drawing-in draft and cam plan for a simple terry fabric. From the interlacings, it would not seem possible that the ups and downs would produce a loop as we know it in terry cloth. In fact, the weave as shown would not create any special fabric, unless the principle of terry weaving is understood.

A loom capable of producing terry cloth must have several special attachments compared with the conventional single-shuttle loom. These are as follows:

(1) A swinging reed. This feature allows the reed to pivot in the reed cap, and will swing back during the beat-up, on the first two picks, yet will hold firm during the beat-up on the third pick. It must also be capable of a firm beat-up every pick when making a border. This is shown in Fig. 50.

The setting of the swinging reed is important for it means quality of fabric, and when considered with the pile let-off gear it means delivery. Referring to Figs. 51 and 52 the adjustment is as follows.

Step 1—With lay at front center set terry cam so that the center line through its low point coincides with the center of the cam lever roll. (Fig. 51)

Step 2—With set screws "B" loose, turn adjusting screw "A" to line the reed.

Step 3—Adjust screws "C" until the three centers "D", "E" and "F" are in line.

Step 4—Locate studs "G" so that the backstay is bearing against the screws "A" and tighten set screws "B". (Fig. 51) Care must be taken not to cramp the backstay.

Step 5—After adjusting connectors "H" to make them of equal length, assemble them to the rocker levers. Slots are provided here to allow for slight variations.

Step 6—Turn lay to next pick. After loosening the bolt "L" in the hub of the cam lever, turn set screw "K" until the desired reed opening is obtained. Turn clockwise for less opening, counter-clockwise for more opening. The maximum opening possible is approximately 1½ inches. (Fig. 52) Tighten bolt in cam lever and recheck reed opening.

(2) A positive terry beam let-off for making the loop. Since this is a warp pile fabric, the pile comes from an extra beam, and brackets or supports must be on the loom to accommodate this beam. This is shown in Fig. 53.

(3) A take-up motion with a special pawl that can be raised in order that the normal take-up can be stopped. This is shown in Fig. 54.

In terry towel weaving, to obtain a perfect joint between the plain and the terry weave it is essential that the take-up does not function during the transition. The take-up will not function if the hold pawl is lifted out of contact with the take-up ratchet. The means for lifting the hold pawl has been provided by a lever "A" in the box motion indicator.

The hold pawl "B" should be lifted when the take-up pawl "C" is exerting pressure on the take-up ratchet "D" and the pressure is relieved from "B". The pressure on "B" is minimum when the lay is at front center.

The indicator should be timed as follows:

Step 1—Turn loom until it has picked from the drop box end and the lay is 6½ inches before front center as measured from the reed line to the inside corner of the breastbeam.

Step 2—Loosen set screws in the hub of the box motion indicate gear "E" on the crankshaft.

Step 3—Turn hand wheel on vertical shaft clockwise to the point where the worm gear "F" on the box chain cylinder shaft starts to move.

Step 4—Tighten set screws in hub of gear "E" on the crankshaft.

(4) An indicator chain which will control the swinging reed and take-up motion pawl. If the loom is equipped with a dobby head and boxes, this indicator chain will also control the boxes.

Although not essential to weave terry, many towels are woven on a loom equipped with a dobby head. In this case, the added attachments will include: (a) a 4x1 box motion; (b) an automatic bobbin changing mechanism for

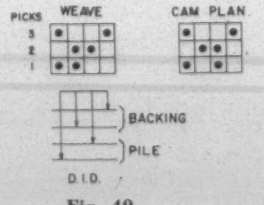


Fig. 49

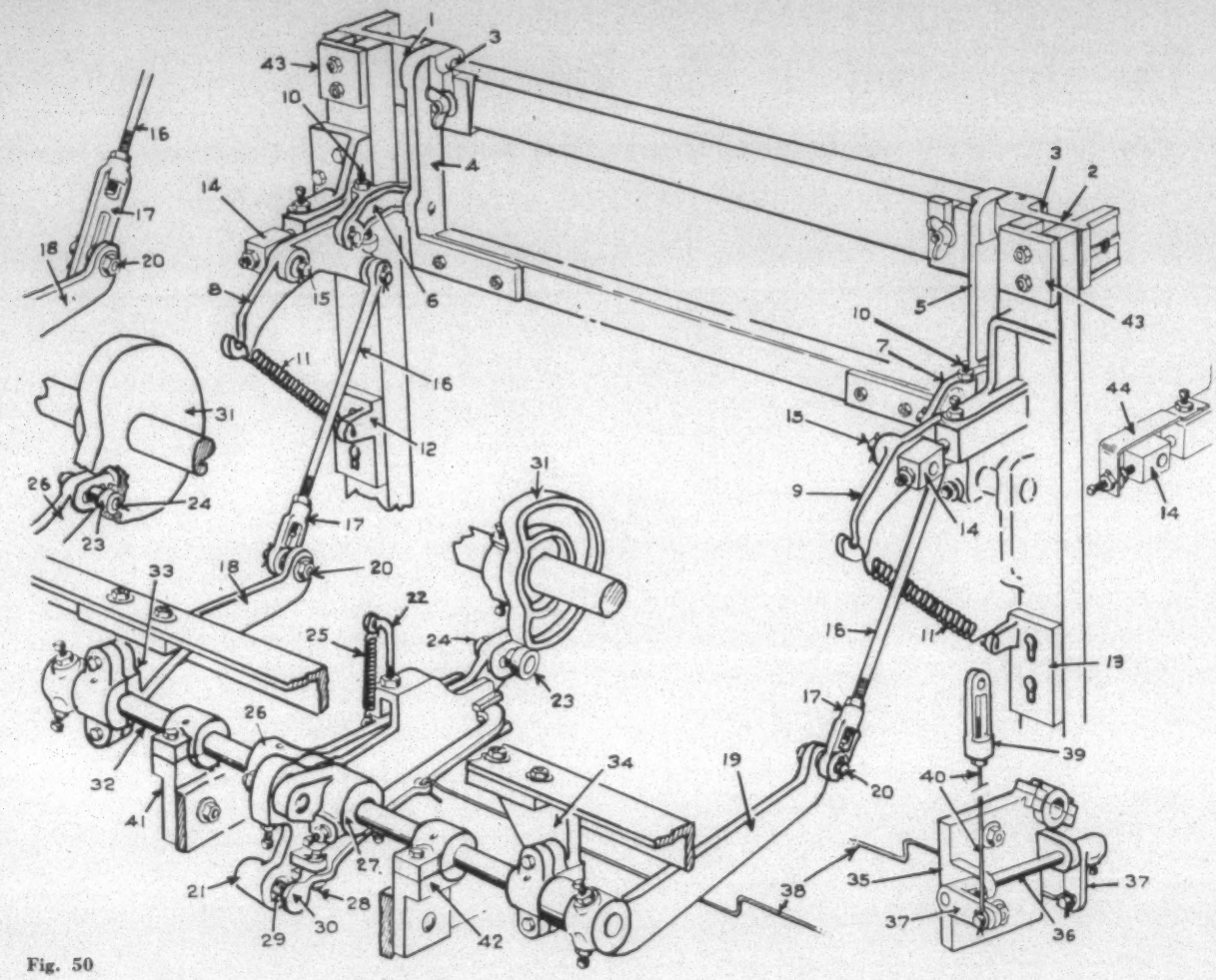


Fig. 50

selecting all four boxes; (c) a 20-harness dobby, with two cylinders and selection of cylinders.

Inexpensive "yardage" terry may be woven on a cam loom. If a fancy "unit" towel is to be made, a dobby loom with an indicator chain is used. It is also possible to weave terry cloth on a loom equipped with a jacquard head. In this case, the pile is operated from the jacquard head. The backing ends are the usual 2-1 rib, and controlled by cams with conventional harness frames. If a very fancy towel is desired, the loom may be set up with a jacquard for the pile, and a dobby for the backing. This is seldom done however.

From the drawing-in draft (Fig. 49), it can be seen that the pile harness are in the front position. The pile shed is hardest to make. When the pile ends are up, they should be above the backing and when they are down, they should be below the backing. This means greater movement, and the front harness position are used.

The reeding is generally one pile end one backing end per dent. It is possible to reed two pile ends in one dent, then two backing ends in the next dent.

Fig. 55 shows a cross-section of the three-pick terry weave with loops on the face and back of the fabric. At (a) the first pick has been thrown, and the crankshaft is on front center. Because of the swinging reed feature, the pick is not at the fell of the cloth. At (b) the sceond pick has been thrown, and the crankshaft is at front center. The take-up motion has advanced the cloth one pick, so this second pick is just behind the first pick. The reed again swings, so both picks are still away from the fell. At (c) the third pick has been thrown and again the crankshaft is on front center. This time the reed held firm (did not swing) and all three picks were beaten up to the fell. As this was done, the loops were made. If the pile end is up on pick 3 and pick 1′, the loop is formed on the face. The pile end that is down on pick 3 and pick 1′ forms the loop on the back.

As these three picks are thrown and beaten up thus creating the loops, it is necessary to understand the weave and other motions on the loom which makes this possible.

From Fig. 49 it can be seen that the backing weave is a 2-1 rib. One backing ends starts 2 up and 1 down, the other backing end starts 2 down—1 up. This weave has to be

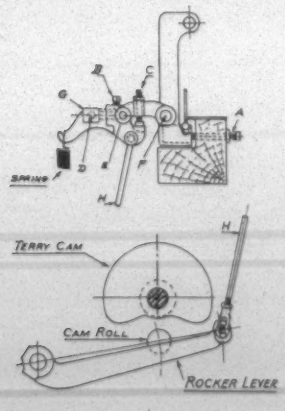


Fig. 51



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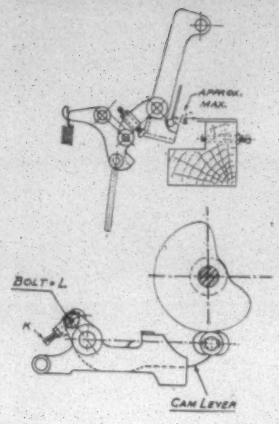


Fig. 52

open, to allow the picks to slip during the firm beat-up. A plain weave backing would have too many interlacings and this slipping could not take place. A 3-3 rib for the backing would be open and allow even more freedom for the picks to slip. This would not be satisfactory, however.

The loop and three picks are held at the fell, while the crankshaft is on front center during the firm beat-up. As the crankshaft advances to top center, the reed moves away from the fell. The loop just made must be held in the cloth, and the 3-3 rib would not have any interlacings to do this. Only the 2-1 rib is satisfactory.

In order for the loop to be made, more pile yarn must be delivered than the backing, but not at a continuous rate as is done in weaving velour. The loop is made every third pick so the pile is let off every third pick. The timing of the harness and pile let-off is shown in Fig. 56.

As the three picks slide to the fell in forming the loop, the backing yarn must be held very tight. If the tension is not great, a small loop may be formed by the backing yarn which would be objectionable. The pile yarn is never as tight as the backing. In fact, it is run so slack that a warp stop motion is not used on the pile yarn. The pile is not tight enough to keep the drops up and an indication to stop would be given even though a pile end is not down. A warp stop motion is used on the backing.

Since the pile yarn is never under great tension, a single-ply yarn is used many times. This will require sizing, but is not heavily starched. A 2¾ to 3% size will weave well. This necessitates the fabric be desized in finishing. A soft twist pile yarn will have greater water absorbency than a hard twist two-ply, even when both yarns have the same yards per pound.

In order to reduce manufacturing cost, some of the cheaper quality narrow towels are woven two widths or more on the loom. A couple dents are shipped in the reed between towels. After coming off the loom, the fabrics are cut apart and later hemmed.

Terry looms run about the same speed as conventional single-shuttle looms. A 36-inch terry cam loom will operate at 185 p.p.m. at an expected efficiency of 88% with 14 looms per weaver.

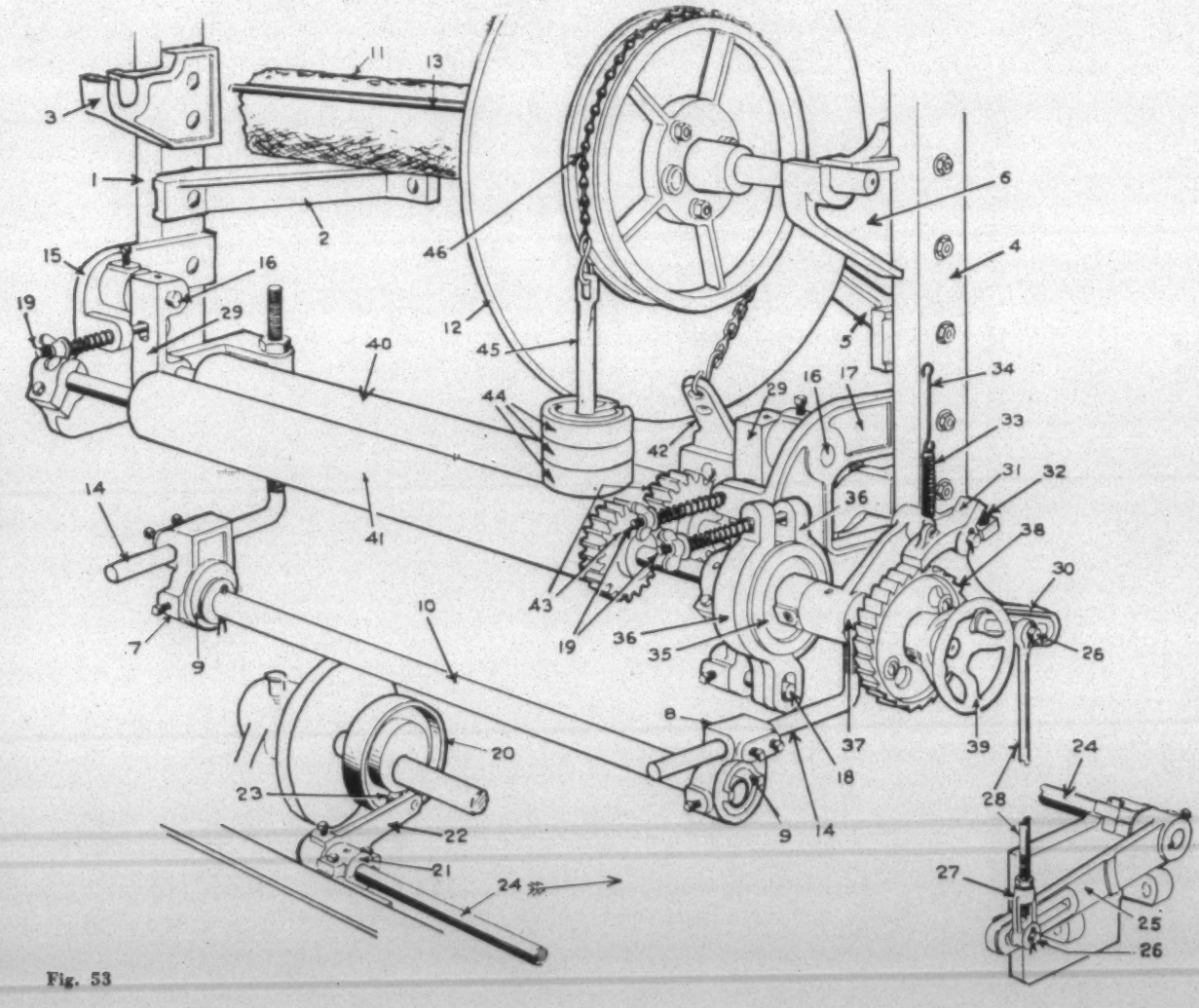


Fig. 53

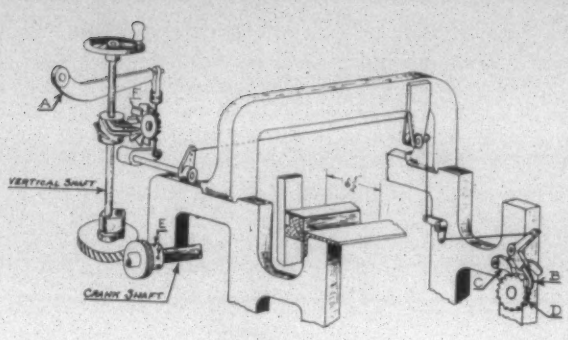


Fig. 54

In the U. S. the three-pick terry is very popular. It can be seen from the cross-section Fig. 55 this is a V tuft. One disadvantage is its poor anchorage. If a loop is caught in a person's ring or fingernail, and the loop pulled, the pile yarn will be removed from the cloth, and the loops will disappear.

The cross-section of a five-pick terry is shown in Fig. 57. The pile forms a "W" tuft which offers much more resistance to pulling than does the three-pick "V" tuft. The big disadvantage of the "W" tuft is in its cost. In a fabric having 45 p.p.i. with a three-pick V tuft, there are

$$\frac{45}{3} = 15 \text{ loops per inch}$$

If this same fabric were made with the five-pick "W" tuft there would be

$$\frac{45}{5} = 9 \text{ loops per inch}$$

This means anchorage is achieved at the sacrifice of coverage. To get 15 loops per inch in the five-pick terry, it would be necessary to go to 15x5 = 75 picks per inch. Few people in this country are willing to pay the extra price for the added anchorage.

Many unusual and decorative terry towels are woven on a loom equipped with a dobby head. It is necessary to know what this loom can do, and the function of the indicator chain, before much designing of a fancy towel can be done.

Fig. 58 shows the indicator chain that is used on a C&K C-5 terry loom. This is the heart and brains of the loom. Eleven positions are on the chain, but only eight are used at the present time.

Position No. 1 is a spare or extra.

Position No. 2 will operate Multiplier 1. A roller here calls in M_1. A spacer means that M_1 will not be used.

Position No. 3 controls which dobby cylinder is used. A roller here will call in and use dobby cylinder No. 1 (inside cylinder). A spacer will allow dobby cylinder No. 2 (outside cylinder) to be used.

Position No. 4 will operate Multiplier 2. A roller calls in M_2; a spacer means that M_2 will not be used.

Position No. 5 controls the rocking of the outside dobby cylinder. This is used for a pick-and-pick border when a high pickage is required. Since there are only two sheds made in this repeat, it is seldom used. A roller will cause this rocking; a spacer will make the inside cylinder turn normally.

Position No. 6 controls boxes 1 and 2. A roller will bring shuttle No. 2 into picking position. A spacer will allow No. 1 shuttle to be thrown.

Position No. 7 controls boxes 3 and 4. A roller will bring shuttle No. 3 into picking position. A roller here and in No. 6 position will bring No. 4 shuttle into picking position.

Position No. 8 controls the take-up motion. A roller will stop the take-up motion for two picks, allowing the picks to be crammed for high pick borders. A spacer will allow the take-up motion to operate in the normal manner.

Position No. 9 controls the swing reed. A roller here will stop the reed from swinging, and the reed will beat-up firm every pick. A spacer will allow the reed to have its regular three-pick terry cycle (two swing—one firm beat-up).

Position No. 10 is a spare or extra.

Position No. 11 is a spare or extra.

Positions 2, 3, 4, 5, 6, 7 and 8 all operate on two-pick cycles. Position 9 operates on a three-pick cycle. When designing terry, it is always a good policy to have each variation in weave and border be a multiple of six picks. This makes it possible for the boxes and swinging reed to come out together.

Delivery Calculations

In any warp pile fabric, delivery is important, for it means weight and cost. In terry this applies, but the amount of swing in the reed must be calculated too, for this makes the size of the loop, and therefore affects the delivery.

The pile delivery change gear is a ratchet wheel, and is operated from a pawl which moves every three picks, when the loop is made. It is mounted directly on the pile delivery roller, so there is no gear train. A standard size roller is used here, which is 8.75 inches (8¾ inches) in circumference.

A loom is set up with a 35-T pile delivery change gear, and a 36-T pick change gear. What pile delivery will this be in the cloth? Taking the calculations step by step will illustrate clearer than to put all the figures in a row.

The pile delivery roller is 8¾ inches in circumference, so that each time the roller turns once, 8¾ inches of pile

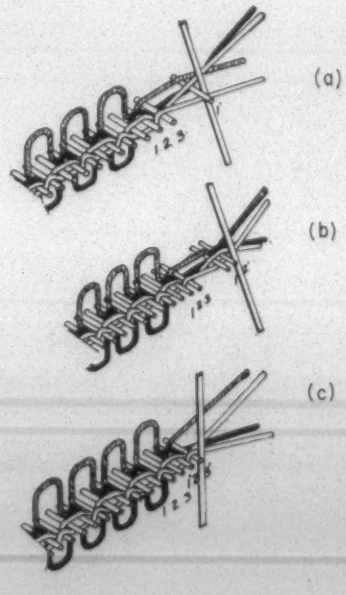


Fig. 55

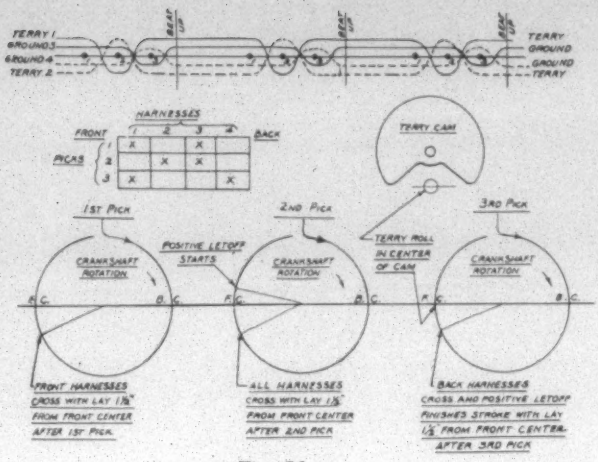


Fig. 56

yarn is fed into the cloth. A 35-T gear is on the roller. Each time the gear turns one tooth, the roller feeds in 1-35th of 8¾ inches or

$$\frac{8\frac{3}{4}}{35} = \frac{35}{4} \times \frac{1}{35} = \frac{1}{4} = .250'' \text{ delivered each three picks.}$$

Since this is the amount of yarn fed from the pile beam every three picks (the amount for each loop) it, too, is the amount the reed should swing. This is the calculated swing. On the loom about one-eighth inch is added to this as an allowance for slippage. So the actual reed swing is .250 inches + .125 inches = .375 inches.

The gear is moved by the ratchet only once in three picks which is the terry cycle so:

$$\frac{.250}{3} = .083'' \text{ of yarn delivery per pick.}$$

There are 36 picks per inch (a 36-T pick change gear) then:

.83" × 36 = 3.00 inches of yarn per inch of cloth.
or yards of yarn per yard of cloth which is delivery
Summing up in one operation:

$$8\frac{3}{4} \text{ (circ. of roller)} \times \underset{\text{(pile gear)}}{\frac{1}{35}} \times \underset{\text{(terry cycle)}}{\frac{1}{3}} \times 36 \text{ (picks/in.)} = 3.00 \text{ delivery}$$

If the customer wanted 36 p.p.i. in a fabric and a delivery of three, what pile delivery change gear should be used?

$$\frac{3 \text{ (delivery)} \times 3 \text{ (terry cycle)}}{36} = .250'' \text{ calculated reed swing}$$

$$\frac{8\frac{3}{4}}{.250} = \text{35-T pile delivery change gear}$$

These calculations do not always come out even. If the

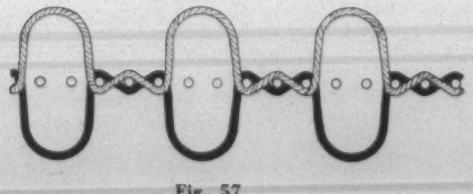


Fig. 57

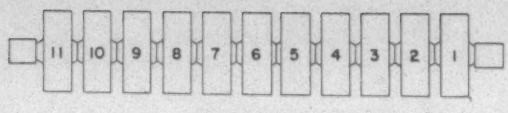


Fig. 58

customer wanted 36 p.p.i. with a delivery of 6, the set-up would be as follows:

$$\frac{6 \times 3}{36} = .500'' \text{ calculated reed swing}$$

$\frac{8\frac{3}{4}}{.500} = 17.5$ tooth change gear. It is not possible to have a part of a tooth in any gear. In this case a 35-T (2×17+1) pile delivery change gear, pulling two teeth at a time will give the correct calculated pile delivery.

Any change in the picks per inch will mean an automatic change in the pick gear. The pile delivery change gear may or may not be changed, depending upon the condition to be met.

If the picks per inch are increased, but the delivery remains the same, the pile gear must be changed. This will reduce the size of the loop. When the picks per inch are increased, but the height of loop remains the same, the pile gear will remain the same, but the delivery will be increased.

Pile delivery change gear means pile height. From the last calculation, there are 36 picks per inch. This will give

$\frac{36 \text{ (p.p.i.)}}{3 \text{ (terry cycle)}} = 12$ loops per inch. With a delivery of 6 the reed swing $\frac{6}{12} = .500$ inch. But the height of loop is about half this amount or

$$\frac{.500''}{2} = .250''$$

If the customer wanted to increase the picks per inch to 42, but wants to keep the size of loop the same, the calculation would be as follows:

$$8\frac{3}{4} \text{ (circ. of roller)} \underset{\text{(pulling 2)}}{\frac{2}{35}} \underset{\text{(pile gear)}}{\frac{1}{3}} \underset{\text{(terry cycle)}}{} \times 42 \text{ (pick/inch} = 7.00 \text{ delivery}$$

$$\frac{42 \text{ p.p.i.}}{3 \text{ (terry cycle)}} = 14 \text{ loops per inch}$$

$$\frac{7 \text{ delivery}}{14 \text{ loops/inch}} = .500 \text{ inch calculated reed swing. The height is about half this swing or } \frac{.500''}{2} = .250'' \text{ which}$$

is the same as above. The increase in delivery from 6 to 7 is necessary because the picks per inch were changed from 36 to 42.

The reed swing should be adjusted to push up the exact amount of pile yarn that is delivered by the pile gear. If more yarn is delivered than the setting of the reed, the pile warp will run slack and will become tangled. If less yarn is delivered than the setting of the reed, the loops will be formed, but the yarn will be stretched because not

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enough pile yarn has been fed in. As the reed moves away from the fell, and the harness change again, the loops will be pulled down to the size that is correct for the actual amount of pile yarn delivered. This causes "ridgy terry."

Variations Of Terry

(a) The towels discussed so far have the pile distributed equally on both sides. It is possible to weave terry with all the pile on one side, which means a flat fabric with no loops on the opposite side. Fig. 59 A shows the weave placing all the loops on the face, while Fig. 59 B will put all the loops on the back. Both these ideas may be incorporated in one fabric in a checkerboard motion. Alternate blocks will have all the loops on the face, while the other blocks will have all the loops on the back. This makes an attractive towel, but is not of the highest quality. They are made to sell for a price.

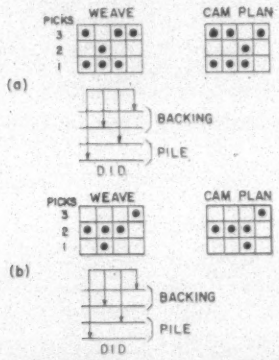


Fig. 59 A **Fig. 59 B**

In Figs. 59 A & B the pile ends are drawn in on two harness, although they weave alike. It is possible to draw both pile ends on the same harness which, with the two backing necessary, makes a total of only three. This is the minimum for weaving terry.

(b) Colors may be employed in the form of stripes. A two-inch row of red contracted with a two-inch row of white makes an attractive towel. The pile beam is made in the form of a pattern beam. It would be advisable to have the backing the same color as the pile to obtain a solid effect in the cloth. This would require the backing beam to be made in the form of a pattern beam too.

On a dobby loom with a drop box the same colors in the warp may be crossed in the filling. This will produce checks. In the above case, the red filling will make a solid color with the red warp, but will look a little washed out in the white stripe.

(c) If the pile beam is dressed one white, one black, an interesting variation can be seen. In some areas the black loops will be put on the face to create the design. This could be in the form of an elephant or floral design. The background would have the white loops on the face. In the area where the white is on the face, the black is on the back. Such fabrics are many times woven on a loom equipped with a jacquard head. The figures are generally large and bold, for the construction (ends and picks per inch) in terry does not allow much detail.

Next Month: Chapter XI, Pile Rugs

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BOOTH 501

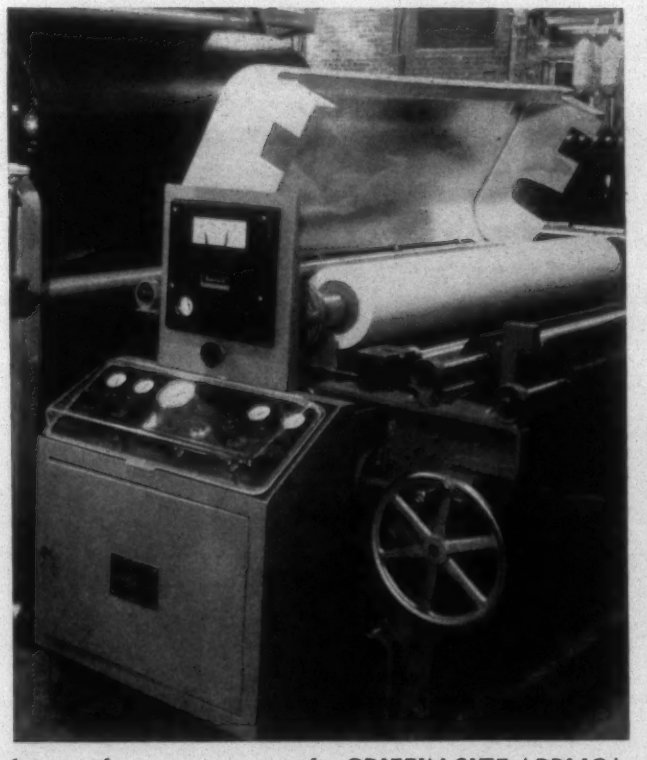
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Question No. 1—What has been your experience with the use of synthetic clearer covering on revolving top clearers?

Mill A: We tried using Sta-Clean synthetic clearers on our 48.5s. We found our rolls needed picking more often and we got an excessive build-up of fly or waste in the drafting zone. We ran the clearers at slow speed and did not notice any bad effect on the yarn appearance.

Mill B: We have Armstrong synthetic clearers on our 8s, 12s and 13s yarns. We have a build-up of waste or fly between the apron and the front roll but do not pick rolls more often than before. We don't think the covering has a bad effect on the yarn appearance.

Mill C: We tried the synthetic clearers and they did not work out on our 4s and 16s filling and 16s warp. We noticed an increase in build-up of fly around the drafting element but do not pick rolls more often. The synthetic clearers have no effect on yarn appearance except where the clearer waste turns loose from the clearer and feeds into the yarn. This causes a slub or gout. We have tried running the synthetic clearers fast and slow and had trouble from waste feeding into the yarn at both speeds.

Mill D: We use Armstrong synthetic clearer covering on revolving top clearers on our 25s warp. We have found no excess fly in the drafting area but pick rolls once every three days instead of once per week as previously. The synthetic clearers have no effect on yarn appearance. We have had some trouble with glue coming loose and more ends lapping up.

Mill E: We tried Armstrong synthetic covering on revolving top clearers in one spinning room and liked the results so well that all rooms were put on. We found that the synthetic covers clean much easier and noticed no ill effects in waste build-up or excess fly on counts from 6s to 27s.

Mill F: We use Sta-Clean clearers on 2s to 8s and find more build-up of waste in drafting zones. Rolls require picking more often but we do not see any adverse effect on yarn appearance from use of the synthetic clearers.

Mill G: We have experimented with the corrugated synthetic clearers on counts from 8.80s to 16s. This clearer looked good but instead of picking up the excess lint, it was left on the rolls and went into the yarn.

Mill H: We use Sta-Clean synthetic clearers on 6s to 20s and do not have any more waste build-up in the drafting zone than with conventional revolving clearers covered with felt. We neither have need for more roll picking nor see any ill effect in yarn appearance from use of this type clearer.

Mill I: We have had 135 frames on Sta-Clean clearers on yarns from 14.5s to 25s. We did not change the roller picking schedule. Recently we have noticed an increase in nep-like particles on our yarns and are taking these clearers off in an attempt to stop this.

Mill J: We use the smooth type Dayton synthetic clearers on our 30s yarn made from 100% viscose. We have not noticed an increase in waste or lint build-up in drafting zone. Our roll picking schedule is now once per 88 hours instead of the previously used once per 120 hours. The synthetic clearers do not have a noticeable ill effect on yarn appearance.

Mill K: We used Sta-Clean clearers on our yarns averaging 7s. We had an increase in waste build-up in the drafting zone and had to pick rolls more often but did not see an adverse effect on yarn appearance. We have discontinued using them.

Mill L: We have had limited experience with the sponge-

Question No. 2—Please give the following information about your filling spinning package size: (a) yarn number; (b) twist multiple; (c) length of quill; (d) diameter of package; (e) length of taper; (f) type and size cam; (g) size of cam follower; and (h) weight of yarn on package.

Mill	Yarn No.	T.M.	Length Quill	Diam. Pack.	Length Taper	Type & Size Cam	Size Cam Follower	Weight Package
A	23	3.90	10⅜" (quilled)	2¼"	2¼"	6-point	1¼"	5.55 oz.
B	48.5	3.11	9"	1 11/16"	2 7/16"	3-point	1¼"	0.27 lb.
C	13-43	3.80	8¾"	1⅝"	1⅞"	3-point	1 3/16"	0.12 lb.
D	9.75-15.5	4.35	8¾"	1 5/16"	2"	8-point	1¼"	0.103 lb.
E	14.50	3.86	8¾"	1 5/16"	2"	Regular		0.140 lb.
F	3.25-16	3.35	8¾"	1 7/16"	2¼"	Standard	1⅛"	0.095 lb.
G	41	4.25	8"	1 5/16"	1¾"	4-point	1⅜"	0.084 lb.
H	4.75	3.50	8¾"	1⅜"	1 13/16"	Heart	1 5/32"	0.091 lb.
I	3.5-18	3.75-3.85	8¾"	1⅜"	1¾"	3-point		1.45-1.60 oz.
J	6-20	3.40-4.00	8¾"	1¼"-1⅜"	1¾" & 2"	3-point	1"	0.104-0.139 oz.
K	17.50	3.75	8¾"	1 11/32"	1¼" to 1⅞"	4-point	1"	2 oz.
L	14-45	3.52-4.43	8" & 8¾"	1¼" to 1 11/32"	1½" to 1⅞"	3-point 4-point	1⅛"	1¼ & 2 oz.
M	16-25	3.50-3.75	8¾"	1⅜"	2"	3-point	1⅛"	1.65 oz.
N	13.3	3.85	8¾"	1 13/32"	1⅞"	3-point	1 3/16"	0.117 lb.
O	24.6	4.15	8¾"	1 5/16"	1⅞"	3-point	1 3/16"	0.103 lb.

type revolving top clearers on yarns from 2s to 12s. We have had no excessive fly or build-up in the drafting area and have not changed our roll picking schedule. The clearers have no effect on yarn appearance.

Mill M: We have about 15 frames equipped with synthetic revolving clearers. Our clearers are on 2¾-inch gauge frames with the predominant count being combed 19s. A build-up of fly was noticed when we ran the clearers at slow speed. This build-up has not been a problem since changing to fast speed. The build-up at slow speed was actually noticed on the clearer itself rather than the drafting zone. We do not pick these rolls any more often than conventional clearers. We have seen no difference whatsoever in yarn appearance using the synthetic clearers.

Question No. 3—What relative humidity and temperature do you find gives the best operating conditions with vacuum end collection systems? What change in humidity was made when changing from lap stick to vacuum end collection? Do you have more roller laps with high or low relative humidity?

Mill A: We operate our spinning room at 55% relative humidity and would like to see the temperature not go over 85°. In Summer months, the temperature rises considerably higher at times. We made no change in going from lap sticks to vacuum end collection. We have had the experience of running relatives as high as 72% without getting into trouble with roller laps.

Mill B: We run at 42% relative humidity and 88° temperature. We have more roller laps at higher relative humidity.

Mill C: We run our spinning at 45 to 50% relative humidity and 85° temperature. When going to vacuum end collection we reduced our relative humidity 10%. We have more top roll laps with high humidities.

Mill D: We run 52% relative humidity and 85° temperature in our spinning room. We didn't change our relative humidity when going to vacuum end collection. We have more lapping with low humidity.

Mill E: We keep 50% relative humidity and as close to 80° temperature as possible in our spinning department. Before putting in vacuum end collection we ran 62% relative humidity. We have more roller laps with high humidity.

Mill F: With vacuum end collection system, we find best operating conditions with a relative humidity of 45% and temperature of 85°. When changing from lap stick to vacuum end collection, humidity was lowered from 55% to 45%. We have more roll laps with high humidity.

Mill G: We ran our spinning with a relative humidity from 55% to 59% before we put in vacuum end collection system. After the installation we found it necessary to drop to 48% to 50%. If the humidity gets over 50% we get roller lapping.

Mill H: We get best operating results in our spinning with a relative humidity of 55%. We have vacuum end collection. We have more roller laps with high relative humidity.

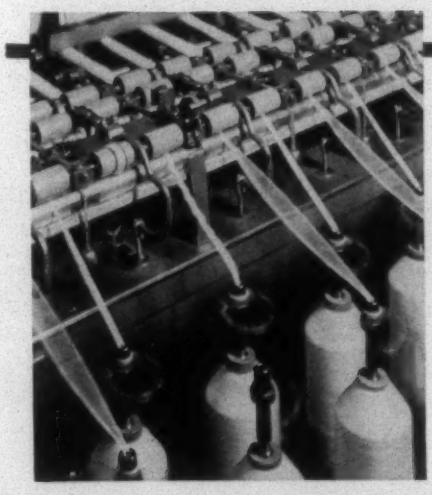
Mill I: We run our spinning room between 39% and 41% relative humidity. Before putting in vacuum end collection we ran around 55%. We have more roller laps with high relative humidity.

Mill J: We find that in our low ceiling spinning room a relative humidity of from 49% to 50% gives us the best



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results, depending on weather conditions. We lowered our relative humidity approximately 10% when we installed vacuum cleaning. We find that we will have just as many laps with too low humidity as with too high humidity.

Mill K: We find the best operating conditions in Winter months with 48% relative humidity and 85° temperature. In the Summer we run a 55% relative humidity and an 85° temperature. We do not have refrigeration. When we had lap sticks we ran a relative humidity of 60%. We believe we have more roller laps with high rather than low humidity.

Mill L: In processing synthetic blends for best operating conditions using vacuum end collection, we use 50% relative humidity at 85° temperature. When we made the change from lap sticks to vacuum collection we lowered our humidity from 55% to 50%. We have more laps with higher relative humidity. Also, we have more gumming in the system with high relative humidity.

Question No. 4—What are your results with soft spinning cots?

Mill A: We have found no improvement in the breaking strength by using soft spinning cots. We buff soft and regular cots once per year.

Mill B: We lowered our ends-down by 10% using soft cots. We also had a slight increase in yarn strength. We buff soft cots once per year and regular cots once per three months.

Mill C: We use soft cots on anti-friction top rolls and our end breakage is about the same as with conventional cots. Yarn strength is up. We buff soft and regular cots every six to twelve months depending on changes made from fine to coarse yarns.

Mill D: We discontinued using soft cots.

Mill E: We have increased our break factor 100 points and decreased our ends-down using soft cots. We buff soft and regular cots once per five months.

Mill F: We use soft cots in our back lines only. Soft cots have reduced our ends-down and raised our breaking strength slightly. Soft cots are buffed every four months. Regular cots are buffed every six months.

Mill G: When we went to the soft cot, we changed our drafting system and revamped our spinning. It would be difficult to state what improvement in breaking strength and ends-down could be contributed to soft cots. We buff soft cots every two to three years.

Mill H: Our experience with soft cots has not been favorable. We did not keep them on long enough to record comparisons.

Question No. 5—What type build do you use on spinning bobbins that are run on Barber-Colman spoolers?

Mill A: We run 19.50s, 23s and 31s warp, and 23s filling. All yarns are run on 2¼-inch rings, 10⅜ x $1\frac{3}{16}$-inch bobbins with filling wind. These yarns are spooled satisfactorily on the Barber-Colman spooler at 1,224 y.p.m. We use a six-point filling cam.

Mill B: We spin 48.5s on a two-inch ring and nine-inch bobbin with filling build. This yarn runs at 1,000 y.p.m. on the Barber-Colman spooler with about 2% slough-offs. Our returns on spoolers from all causes is about 14%. We use a three lobe filling cam on our frames.

Mill C: We run a combination wind on yarns ranging from 17s to 31s. Our frames have 2¼-inch and 2½-inch

rings with ten-inch bobbins. We run our Barber-Colman spoolers at 1,000 y.p.m. with 1% sloughing.

Mill D: We use filling wind on all spinning that goes to the Barber-Colman spooler. Our counts range from 6s to 30s knitting, filling and warp yarn. We have 10½-inch bobbins and 1⅞, 2, 2 1/16, 2¼ and 2¾-inch rings. We spool knitting yarns 1,000 y.p.m. Our warp and filling yarns are spooled at 1,100 y.p.m. We have about 2% sloughed yarn. We have used three different type cams—one six-point, and two three-point. We have found one three-point cam to be best. This filling wind has reduced our tailings at the spooler and also reduced spooler waste from 0.189 to 0.132.

Mill E: We spin 25s and 31s with warp build on two-inch rings and 8⅞-inch bobbins. These yarns are spooled at 1,200 y.p.m. We do not keep records of the per cent sloughing but total tailings are about 9% on 25s and 8.5% on 31s.

Mill F: We are running yarns from 3.50s to 36s and use a combination wind on 2, 2¼ and 2½-inch rings with an eight-inch stroke on straight paper tube bobbins. We run our spoolers no faster than necessary to wind off the yarn by the time the spooler traveler makes its circuit. We have three different length spoolers and the coarser yarns run on the shorter spoolers. Finer yarns on longer spoolers. It is necessary to run the finer yarns up to 1,300 y.p.m. Coarser yarns run no more than 900 y.p.m. We have about 40 counts of yarn being spooled daily and the sloughs will not exceed 1.5% average on all counts.

Mill G: We use the combination build on bobbins run on the Barber-Colman spooler. Our yarn number is 8.80s, ring sizes are 2½ and 3-inch, and our package weighs 10.25 ounces. We run the spooler at 1,000 y.p.m.

Mill H: We spool 10s to 19s at 1,200 y.p.m. with very little sloughing. We do have about 15% tailings.

Mill I: We use combination wind on bobbins to be run on our Barber-Colman spooler. We run 5s to 30s with 2¼-inch rings, and ten-inch long bobbins. We spool the yarns at 980 y.p.m. and have less than 0.5% sloughs.

Question No. 6—Has the quality of your product improved after you replaced gears which the gear tester showed to be out of tolerance?

Mill A: We used a gear tester to check all gears, and we took gears out of use that exceeded 0.007-inch tolerance.

Mill B: Quality of yarn certainly improves with the use of close tolerance gears but we have no charts or figures available.

Mill C: The quality of our product has improved after we replaced gears that the gear tester showed to be out of tolerance. We found the greatest improvement in our card sliver where we were able to reduce the sliver irregularity considerably. Also, on drawing, roving and spinning gears, we have been able to weed out the bad gears. We feel this has had a definite bearing on better quality cloth.

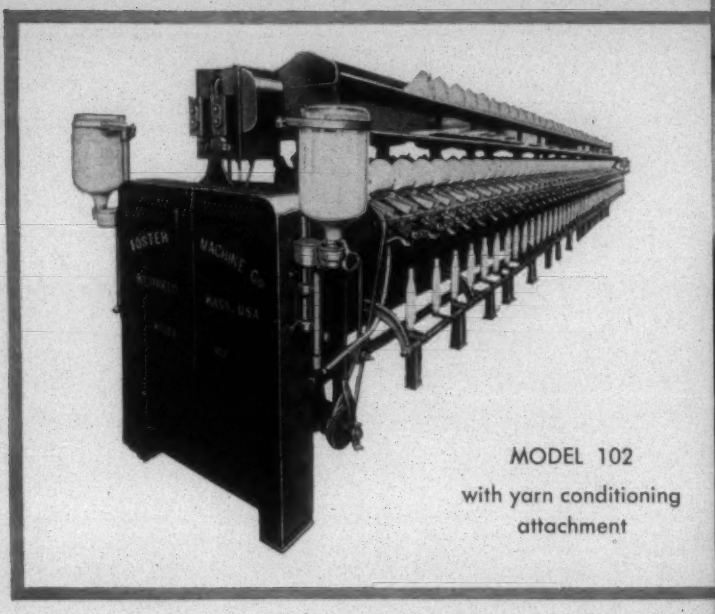
Mill D: We have tested all gears in drafting elements and replaced those out of tolerance. When gears were checked, we found gears with burrs, gears out of round, gears which had been run improperly aligned and gears with partly missing teeth. We feel that the saving on gears will pay for testing, plus the improved quality of yarn.

Mill E: Our experience with gear testing has definitely shown that gears that are out of tolerance will definitely affect the quality of yarn.

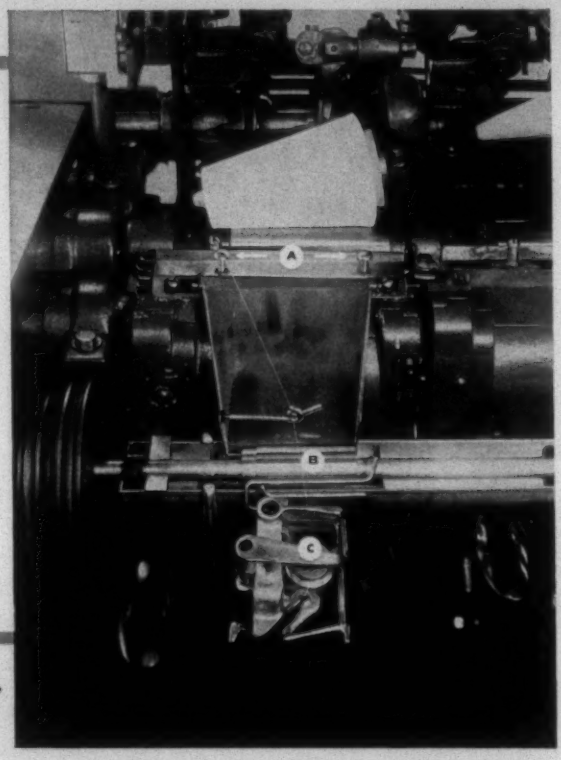


FOSTER MODEL 102

. . . For Backwinding Bulk, Stretch and Texturized Yarns



MODEL 102
with yarn conditioning attachment

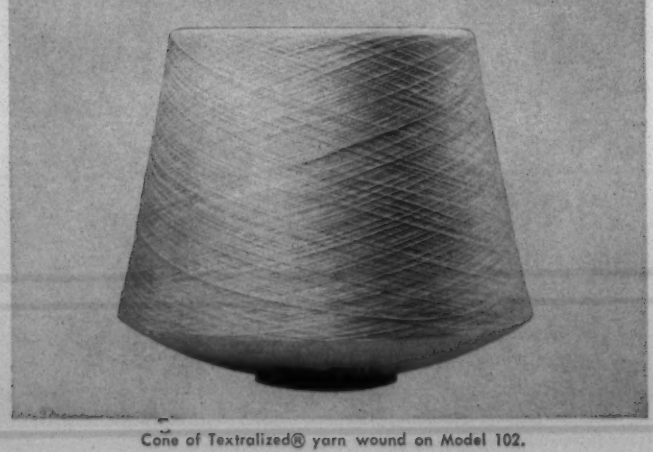


Mushroom buttons (A), moistening attachment (B) and tension attachment (C) on Model 102.

An Outstanding Example of This Machine's

FLEXIBILITY

For many years the Foster Model 102 has been widely accepted for the winding of all types and counts of spun yarns, because of its flexibility, or adaptability, including adjustable angle of wind and adjustable taper. Once again this reputation is confirmed by the machine's recent economical adaptation to the winding of bulk, stretch and texturized yarns.



Cone of Textralized® yarn wound on Model 102.

In addition to flexibility the Model 102 offers the following: —

QUALITY CONES. The increased taper reduces yarn drag and equalizes tension at all cone diameters. The convex base prevents "nipitis". Highly efficient slub catchers automatically inspect yarn. Ribbon breaker prevents ribbon wind. Idler shell on winding drum prevents chafing of yarn.

ECONOMY. Doubles production and reduces operating costs ⅓, as compared with obsolete machines, due to high speed, self threading tension device, easy donning and doffing and empty bobbin conveyor discharging into standard size truck. Repair costs as low as $10.00 per year per 100 spindles. Simple adjustments which any competent fixer can make.

Bulletin A-95-A on request

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Corlin's modern laboratory handles the problems of shade matching and the production of sample dye lots for the designers.

Linn-Corriher Yarn Mills Opens New Package Dyeing Plant

CORLIN Processing Co., Landis, N. C., a joint venture of Linn and Corriher Mills of Landis, is now in operation in its new $750,000 plant. The new-from-the-ground-up package dyeing plant is said to be the first of its type built in the U. S. in seven years. This marks the mills' first entry into the dyed yarn field in their 60 years of existence.

The move was first considered 30 years ago and was again considered in 1948. However, it did not become economically feasible until last year when citizens of Landis agreed to build a modern sewage disposal plant and a 100,000 gallon water tower. The city is expected to receive an additional annual income from the water system of $12,000. It will receive another $4,000 in taxes. In addition, the local economy will receive some $200,000 in wages from the plant.

Since it was the decision of Corlin's management to install the "dyeing machinery of tomorrow" in the plant, the most modern and complete equipment available was sought. The units chosen are said to incorporate the most advanced dyeing features. They are designed for working pressures to 85 p.s.i. and temperatures to 350°.

One feature of the new plant is its straight line production which makes possible the continuous one-way flow of yarn from the spinning frame through the dyehouse to the ultimate consumer. This is said to eliminate back-up and is expected to provide faster customer service.

The yarn is wound onto dye tubes at the Linn and Corriher plants, is loaded in self-contained pallets and trucked across town to Corlin Processing where it is dyed, dried and moved to the winding room, within the dyehouse, for backwinding, packing and shipping directly to the customer.

The plant's machinery arrangement provides great flexibility, permitting production of dye lots ranging from 200 to 1,500 pounds of yarn in a single dye bath. This in turn assures correct shade and level dyeing throughout any given batch.

Dyestuffs and chemicals are mixed in a central mixing room on the mezzanine. From here they are fed directly, as needed, through overhead glass tubing to the dyeing



This over-all view of the plant shows the mezzanine *(rear)* where dyestuffs and chemicals are mixed. From the mezzanine they are fed directly to the dyeing machines through overhead glass tubing.



Corlin's officers are *(left to right)* J. Fred Corriher, chairman of the board; Lane Drye, secretary-treasurer; and J. Frank Lipe, president.

machines. A signal light and intercom system allow instantaneous communication between the dyer and the mixing room.

Shade matching and the producing of dye lots for the stylists and designers are done in a completely equipped laboratory. The laboratory produces sample dye lots up to 15 pounds for the use of stylists and designers in developmental work before seasonal demands require large production batches of yarn.

The drying equipment consists of static-pressure rapid dryers which are designed to assure fast delivery of orders. In order to overcome the bottleneck that usually occurs in drying, Corlin installed these rapid dryers and provided for excess capacity beyond its actual requirements. All dyeing and drying machinery was produced and installed by Gaston County Dyeing Machine Co., Stanley, N. C. Instruments for the machinery were provided by the Foxboro Co. Electrical equipment was produced by Allis-Chalmers Mfg. Co.

Founded In 1900

Linn Mills was founded in 1900 by D. B. Coltrane, then president of the Concord National Bank, C. J. Deal and L. A. Corriher, partners in the real estate and lumber businesses. All were natives of the Landis community.

These men were inspired by the success of the Paterson Mfg. Co. in nearby China Grove (now Cannon Mills Co.). They felt that a similar yarn producing mill in Landis would be equally successful. The mill was planned with an initial capacity of 5,000 spindles and a capitalization of $5,000. It was named after C. A. Linn, owner of much of the acreage around Landis. When the mill building was completed George O. Lipe joined the firm to buy and set up the machinery and equipment.

Linn Mills produced yarns for weaving and insulating at the outset. However, about 1948 insulating yarns were discontinued because of stiff competition from plastic wire covering materials. At that time production was limited to double carded and combed knitting yarns.

The company had its first expansion in 1912 when 6,000 spindles were added to produce double carded knitting yarn ranging in counts from 14s to 30s. In 1917, with World War I coming on, the mill added 12,000 more spindles to increase production of double carded knitting yarns. In 1937 the demand for double carded yarns had increased to the point where 11,000 more spindles were added and in 1950 the 7,500 spindle White Park Mill at Concord, N. C., was purchased. The mill was converted from a coarse count carded mill to a combed yarn mill, producing medium counts. White Park brought Linn Mills' spindleage to the present 40,000.

Corriher Mills Co., sister mill to Linn but a separate corporation, was founded in 1907. It initially had 5,000 spindles operating on double carded knitting yarns. In 1927 it was converted into a combed yarn mill and more spindles were added. The spindleage was further increased in 1937 to the present 40,000 spindle capacity.

From its original production of 15,000 pounds of yarn per week, Linn Mills has increased its output to 115,000 pounds per week. Corriher now produces 115;000 pounds per week as compared with 10,000 at the beginning.

Officers of the new corporation are President J. Frank Lipe, also president of Linn Mills Co.; Secretary-Treasurer Lane Drye, also secretary of Linn Mills; Chairman of the Board J. Fred Corriher, president of Corriher Mills; and Plant Manager Robert Hundley.

Patent Sought On Ultrasonic Dye Method

Mrs. Ethel R. Flemming, director of research, Harrison Electronics Inc., Newton Highlands, Mass., has made application for a patent on a method and equipment for the ultrasonic dyeing of natural and synthetic fibers. The new method is said to permit dyeing by continuous flow methods and to eliminate the heavy chambers necessary in high-pressure dyeing.

The ultrasonic method is said to apply a negative pressure which releases entrapped gasses and permits faster uptake. It uses temperatures 20 to 30 degrees below the boil and has an electronic method controlling the concentration of dye, which is said to produce a uniformity of color and saturation.



CLEMSON'S FIRST CARPET LOOM—The Bigelow-Sanford Carpet Co. recently presented the Clemson College School of Textiles with its first carpet loom, a 27-inch velvet carpet model. Frank Sertl, manager of Bigelow-Sanford's plant at Landrum, S. C., made the presentation to Clemson President Robert C. Edwards and Dean Gaston Gage of the School of Textiles. Shown inspecting the loom are *(left to right)* Joseph Jervis, plant manager of Rocky River Mills, Calhoun Falls, S. C.; Richard Swallow, plant manager of Belton (S. C.) Yarn Mills; William Kay, director of yarn manufacturing for Bigelow-Sanford; Sertl, Edwards and Gage.

Conducting A Mill Training Program

THE FINAL INSTALLMENT OF OUR TRAINING SERIES DESCRIBES IN FULL DETAIL THE TRAINING PROGRAM USED BY OPP-MICOLAS MILLS WITH ITS NEW EMPLOYEES

By C. ROSS BEALL*

Part Two

ONE of our first problems in training at Opp-Micolas was how we were to train for the best possible results in the shortest length of time. We started out with nine learner weavers at the Opp mill where the need was the greatest in our weaving department. We made a careful survey through the overseers as to who should get the attention first in training. It was determined that the weaving department needed attention first. Our first consideration was who should be selected as the weaver instructor. After carefully going over the personnel in this department as to their qualifications, we selected an outstanding young man. He was a fast production weaver who consistently ran good quality cloth. He was regular in attendance and he did not smoke. The reason smoking is mentioned is that often in the selection of an instructor that fact is overlooked. Since some of the learner weavers may smoke, a tendency might be to encourage them to remain in the smoking room too long thereby hindering their progress and development as weavers. When we begin with a new weaver learner we assign him to a certain amount of looms and expect him to maintain at least 90% efficiency on the looms assigned. We thereby tell him when he can take a break and limit his break time so as not to greatly affect this expected efficiency.

Orientation Period

Our training begins with the orientation period. When a new employee is signed up and has cleared the physical he is immediately referred to the training supervisor. (And may I say here in connection with the physical that the employee is selected for the right stature for the job he is to perform.)

The training supervisor talks with the new worker and explains such things as company policy on absenteeism, safety rules and regulations, break times, eating facilities, vacation, pay, special rules in the department he is to work in and above all the expected time he has to develop to full job capacity.

After briefing the new employee, the training supervisor takes him into the mill for a department-by-department tour. This is always done whether or not the new worker has worked in the mill. This tour acquaints the new worker with the mill layout. In the case of a worker who has never worked in a mill before it gives him a general idea of what happens from the bale to the cloth room.

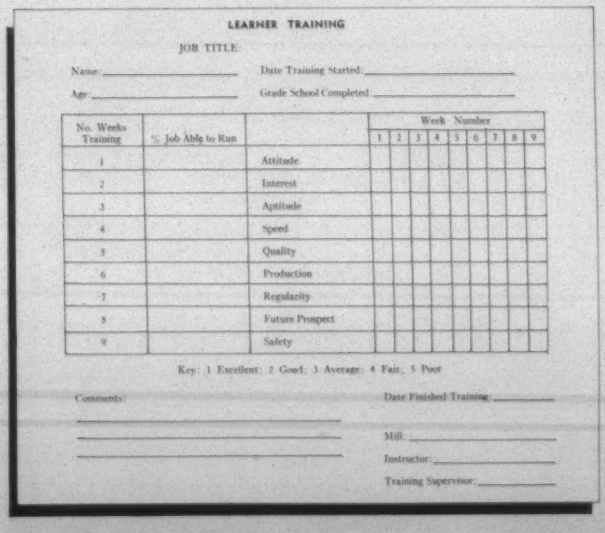
The training supervisor explains in a general way the machine function and the processing action from the opening room through the shipping department. When the trainee reaches the department that he is to work in, the supervisor goes more into detail in his explanation of the operation. He gives ample opportunity for the employee to ask any questions he may have.

The company considers the two to four hours spent in orientation training to be the best money it can spend. Not only does it make for a happier employee but the end results will be far less labor turnover for the company. We have not yet had time for a reflection in labor turnover, but we expect our turnover figure to be reduced very sharply as a result of this phase of our training program.

In the course of his tour, the worker is introduced to the supervisors on the floor and other personnel in the various departments. Usually the plant tour is conducted on the first or second shift since we try to tie in the tour with the hours of the person who has gone through the personnel department and has completed his physical so that he does not have to make a second trip home before going to work. That is, if the employee returns from his physical exam at 4:30 p. m., the training supervisor will conduct him through the mill so that he can be ready to report to the third shift that night, if he wishes. If the new employee returns after 5 p. m. he reports the next day for orientation.

New Employee With Experience

With a new employee who is already experienced, the orientation is still followed except that very little if any processing actions are explained in the tour. Only those which he has not had experience in are emphasized. The major emphasis is put on safety rules, company policies, location of rest rooms, vacation arrangements, water foun-



LEARNER TRAINING

JOB TITLE:

Name: _____ Date Training Started: _____

Age: _____ Grade School Completed: _____

No. Weeks Training	% Job Able to Run		Week Number 1	2	3	4	5	6	7	8	9
1		Attitude									
2		Interest									
3		Aptitude									
4		Speed									
5		Quality									
6		Production									
7		Regularity									
8		Future Prospect									
9		Safety									

Key: 1 Excellent; 2 Good; 3 Average; 4 Fair; 5 Poor

Comments: _____ Date Finished Training: _____

Mill: _____

Instructor: _____

Training Supervisor: _____

A progress form of this type is kept on each learner throughout his training program at Opp-Micolas Mills.

*Training Supervisor, Opp-Micolas Cotton Mills, Opp, Ala.



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tain locations, etc. The most successful type of training program must necessarily incorporate a thorough orientation training period. If this is not done the company may spend money training a person and then lose the investment when the employee leaves over a misunderstanding that could have been cleared up in an orientation period.

The thought might occur to you, "Well, why not just hire a worker whose skills are already higher than average?" This would be fine but who can tell this employee? And further, this type of worker is not applying for jobs in our plants too often.

We are fortunate in having a large number of high school young men and women who enter our plants for training and jobs. We try to hold as many of these workers as possible. We figure the cost of the training supervisor's time in carefully seeing that every new employee is properly indoctrinated before beginning his training, or if already trained, before beginning to work on his job, is more than repaid by the results we obtain in job satisfaction.

Trained In A Group

As an example of how training is done within a particular department, the nine learner weavers mentioned earlier in this article were placed in one weave room in a group. A weaver instructor who had been carefully screened was placed with them. Since we had no trained weaver instructor at this point, the training supervisor worked closely with the appointed instructor coaching him in the techniques of instructing the learners. All learners were assigned to the third shift where they were to work when their training was finished. They are moved up to the other shifts on a seniority basis.

Each of the weaver learners was assigned to the exact number of looms that we felt he could handle at 90% efficiency. This was done after the training supervisor had talked with each of them at length. He reviews with them such matters as quality, progress record reports and what was expected of them during and after the training period. They were also urged to ask any questions they wished to. Regular attendance is stressed at this time.

At the beginning of the training period, the learners were in various stages of learning. Some who had had some experience were started on four to six looms. Those who had no experience were started off on two looms.

Increasing Assignments

The one weave instructor took care of all these learners, going from one to the other until they all could handle the initial looms assigned. After a few nights on this initial assignment, the instructor began to move them out adding one or two looms per night until they got to the point that they could handle 12 looms. At this point we had our instructor give each learner six looms at a time. The learner kept these same looms for one or two weeks, if necessary, until he could consistently produce 90% efficiency. The following week he was assigned six more. This was repeated until each learner was able to take over a full job.

Trial Period

At that point he was put on trial under the instructor's close supervision for one week. Then if his work was satisfactory, the learner was put on trial under the shift super-

visor for one week. If he satisfied the shift foreman he was then released to the weave room overseer. The overseer signs an O. K. on the employee's progress report releasing the training supervisor from further responsibility for the individual.

After a learner can handle 60% of the job, we find it is a good practice to begin raising him proportionately from the minimum starting pay as he progresses toward a full job.

Daily Progress Reports

We "bunch" our learners, that is, we put them together so the instructor will not have so far to range. It can be seen that with several learner weavers or spinners, by the time they were each able to handle 30 or 40 looms or 18 to 20 sides, the instructor would have considerable walking to do. The efficiencies of our learners are figured each night and given to the training supervisor and a copy to the learner himself. We feel that this not only gives us a daily record of progress but causes the learner to put forth a greater effort because he knows he is in competition with others. He is also aware that the quicker he can produce 90% efficiency the quicker he will receive more looms toward a full job and full job pay.

Our instructor reads the pick or hank clocks on a seven-hour basis and figures them on the same basis. We allow our learners downtime for warp outs and big jobs where a machine stands for excessive time. This is done since the few looms to which they may be assigned would cause their efficiency to be very low if something happened to one of the machines with no allowed time. We just leave this machine out of production in figuring efficiency. This enables us to stay close to what our learners are actually able to do.

Time Limits For Each Job

We do set fairly strict time limits for each type of job we train for. At present our time limits are as follows: weavers—six to eight weeks; slubber tenders—12 weeks; spinners—10 to 12 weeks; battery tenders—two weeks; and doffer tenders—eight weeks.

We try to definitely determine within three weeks on all jobs except battery tenders whether or not the learner will develop into a full production worker. We think this holds down our cost on training, for if we find that the worker for some reason cannot adapt to the type of job he is training for within this period, the training supervisor recommends to the overseer of the department his removal from the job.

Mid-Program Conference

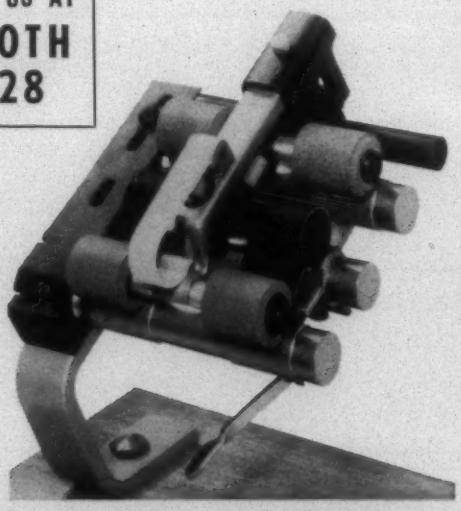
In the middle of his training period, the learner is again called in for a conference with the training supervisor. At this time his past weeks of training are reviewed and he is shown his progress and attendance record. It is here that we can congratulate the new worker if he has done a good job. It also gives the training supervisor and shift supervisor a better perspective of the person who will soon be released on the job as a full job operator. Also, it is here and no later that the final decision on the learners' abilities must be made. For example, within a certain number of weeks

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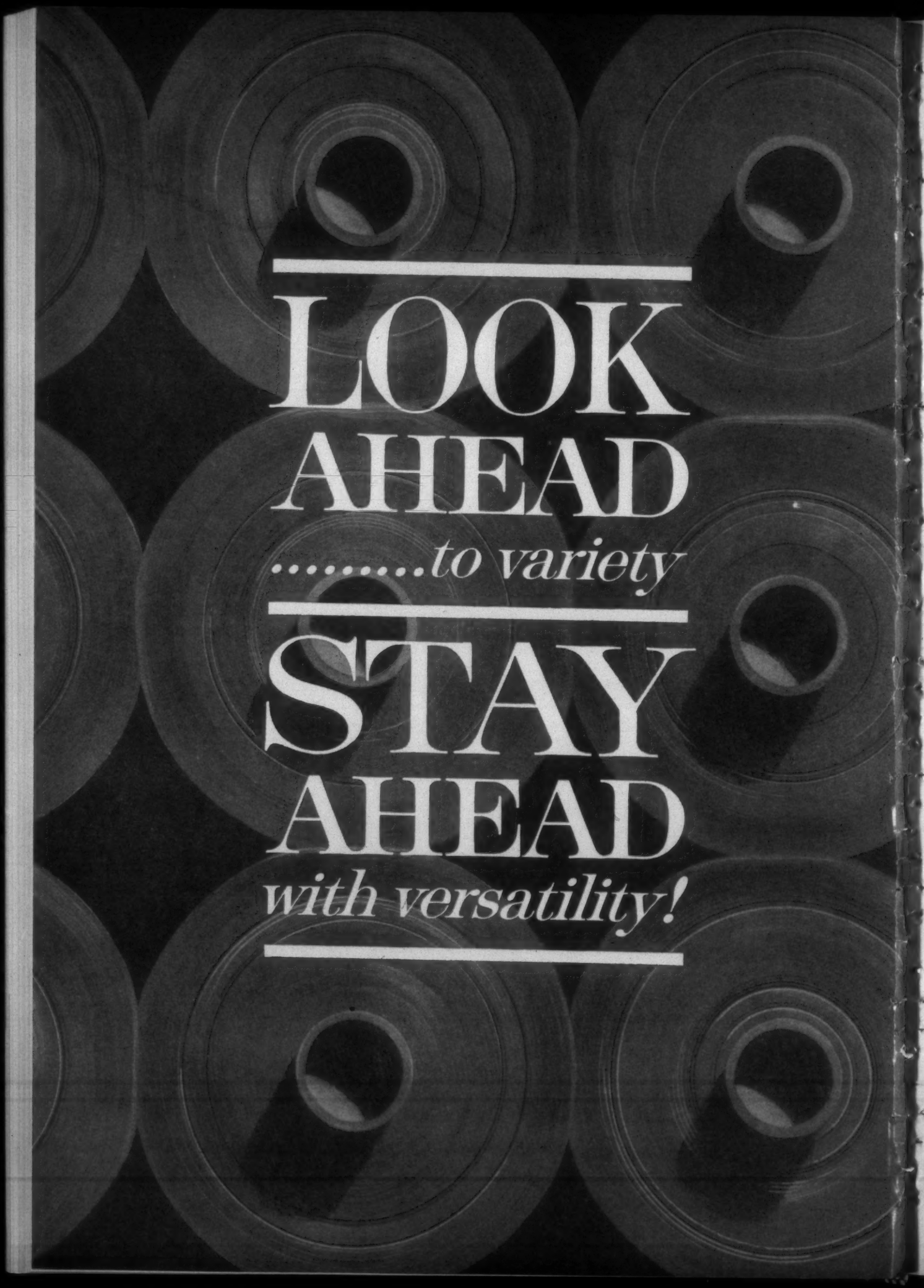
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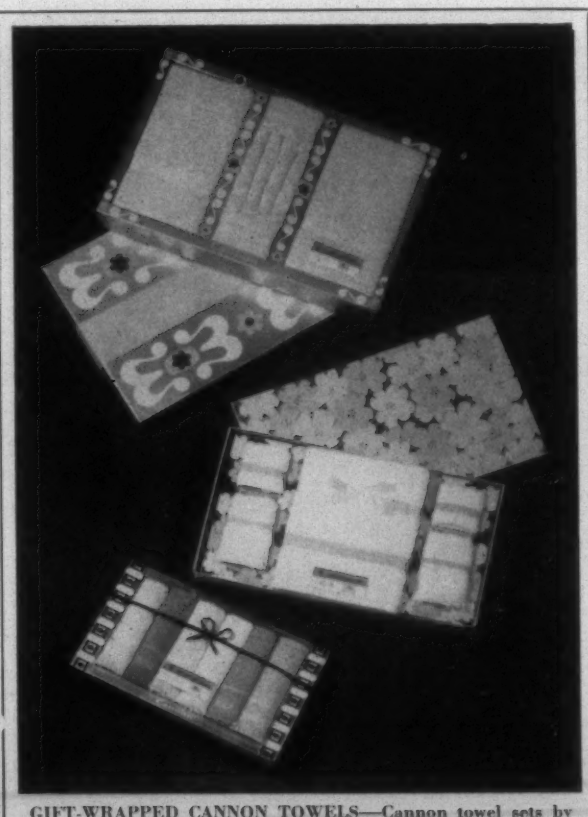
Booth 810 — October 3-7

we ask our instructor to tell us whether or not the worker learner will or will not be able to handle the full job load by the end of the training period. If we find that additional training will be necessary it is here that the decision about whether or not to go further with the new employee is made. This decision is based on his attitude, attendance, etc.

Same Procedure At Each Plant

While the weaver learners were being trained at the Opp plant, we started the training of six learner doffers, four learner slubber tenders and six learner spinners at the Micolas plant.

The same training procedure was used for the Micolas employees. The slubber tenders were shown the initial things they were to learn such as putting up ends, splicing ends, starting and stopping the slubber, kinking ends, etc. Then they were assigned in about three nights to 12 spindles of the slubber to run alone. The regular slubber tender was told to leave these off his assignment. We leave the slubber tender learner on these 12 spindles for one week. The next week he is given 24 spindles and moved up in this same order until he reaches full job ability. Our slubber tender jobs occupy 270 spindles, therefore it can be seen that it takes from 12 to 14 weeks to train a slubber hand. During his period of training, the slubber tender is "paced" carefully on his doffing time since we find that this is where the greatest time is usually lost. We feel that if we can get a learner to the point where he can doff from the time of stopping the frame until it is started in 10 to 12 minutes that he is ready for a full job.



GIFT-WRAPPED CANNON TOWELS—Cannon towel sets by Cannon Mills are being packaged in cartons with a gift-wrapped look. No sales pitch appears anywhere on the carton or cover—there's simply a card insert listing contents and manufacturer. Both cover and carton have feminine designs printed on gold aluminum foil. The cartons were made for Cannon by Continental Can Co.'s boxboard and folding carton division.

Spinner Learners

On our spinner learners we begin in the same manner as described for the other job categories. We have an instructor who teaches them the fundamentals of spinning such as putting up ends, cleaning, patrolling, etc. She then gives each of them one side. Within two nights the learner is given two to four sides. The following week eight sides are added. This continues until she reaches 12 sides, moving up at the rate of two sides a week. Our warp jobs are 24 sides and filling jobs are 16 sides. We alternate our learner spinners between warp and filling so that they can handle either equally as well. We find that it takes about 20% longer to train spinners but it is well worth it to have a versatile group of spinners who are able to run both warp and filling.

Our goal was nine weeks for spinners to learn but at present it has taken us an average of 14 weeks to turn out a good spinner. We feel, however, that in another year of improving our methods and techniques of training that we can cut this training time.

Again with our filling doffers the same procedure is used. The instructor teaches the trainee to piece up ends, pull down and start up frames and generally help other doffers for the first week. The second week the learner is assigned one frame. Then we allow two weeks each on numbers four, five, six and seven.

Keep Tabs On Efficiency

We use stop watches to pace the new worker. Many times we have found that we can in this way step up a person's speed and develop him into a full production employee whereas otherwise he might fail. When a person's pace is too slow to get the required efficiency, the stop watch tells us where the trouble is.

We allow about ten weeks for filling and warp doffers and after they reach more than 60% of full job capacity, we begin to step up their pay, just as we do with the weaver learners. We recommend this procedure on all learner jobs.

There are no short cuts to a good training program but certainly costs can be cut immensely by having a carefully supervised control.

We feel that it is a good idea to put all learners on at the same time so they can finish at approximately the same time and the instructors can return to production work until it is necessary to train another group.

Double Duty For Training Supervisors

Finally, where a mill has only one or two learners that they wish to train at a time, the training supervisor should perform this along with his other duties. Thus it will not be necessary to use a training instructor. Here at Opp-Micolas our training supervisor has other duties such as safety and quality control duties which really is and should be a part of any training program. While many results are intangible as far as benefits derived there are so many more that are tangible and result in tremendous savings to the company that we feel a good training program is not only worthwhile but essential.

July Carpet Wool Stocks Down Some 2% From 53.8 Million Pound Level Of '59

Carpet wool stocks in the U. S. on July 1, 1960, amounted to 45.7 million pounds, scoured basis. This represents a decrease of 0.6 million pounds from the April 1 level, and a decrease of 8.1 million pounds from the July 1, 1959, level.

Stocks held by carpet and carpet yarn manufacturers amounted to 33.9 million pounds, as compared to their stocks of 37.8 million pounds on April 1, 1960. Dealers' stocks of 11.8 million pounds on July 1 of this year were 3.2 million pounds above the stocks level reported for April 1, 1960.

Inventories of carpet type man-made fiber staple amounted to 5.0 million pounds of July 1, 1960. This represents a decrease of 0.9 million pounds from the 5.9 million pounds reported on April 1, 1960.

Stocks Of Carpet Wool And Man-Made Staple
(Thousands of pounds)

Classification	July 1, 1960	April 1, 1960	July 1, 1959	As Reported July 1, 1960 Greasy Wool Equivalent Greasy Weight	Scoured Weight	Scoured Wool
CARPET WOOL STOCKS						
Total(1)	45,725	*46,338	53,813	41,015	30,426	15,299
Held by spinners(2)	33,947	*37,784	43,821	27,841	20,777	13,170
Shorn	30,614	*34,889	40,372	24,783	18,268	12,346
Pulled	3,333	2,895	3,449	3,058	2,509	824
Held by dealers	11,778	8,554	9,992	13,174	9,649	2,129
Shorn	10,293	7,137	8,402	11,513	8,409	1,884
Pulled	1,485	1,417	1,590	1,661	1,240	245
MAN-MADE STAPLE (Carpet Type)	4,954	5,886	4,979	—	—	—

* Revised.

1. Includes stocks held on consignment and stocks in process of manufacture up to the carding operation. Data are not included for companies with stocks of less than 10 thousand pounds.
2. Includes sales yarn mills and carpet mills producing yarn for own use.

Piedmont Section Of A.A.T.C.C. Sets Meeting For September 23-24

The Piedmont Section of the American Association of Textile Chemists & Colorists will hold its Fall meeting September 23-24 at the Hotel Charlotte, Charlotte, N. C. Members of the section will vote on the proposal to divide the Piedmont Section into two sections—one described as "lower Virginia and upper North Carolina" and the other as "the state of South Carolina."

Two technical sessions will be held on September 24 at 1:30 p.m. The first will be headed by Henry Dixon and will be devoted to hosiery and knitgoods. Jack S. Christie of Proctor & Schwartz Inc. will discuss, "Automatic Color Control Applied to Hosiery Processing."

The other session will be devoted to general woven and will be headed by Russ Lawrence. Presentations to be made include: "The Procion-Resin Process," by Dr. C. A. Robinson, Arnold, Hoffman & Co.; and "Optical Brighteners, Their Properties and Light Fastness Characteristics," Dr. G. M. Gantz, General Aniline & Film Corp.

Consumption Of Cotton For Apparel Uses Reached All-Time High Level In 1959

Apparel uses of cotton reached an all-time high of 4,405,000 bales in 1959 as compared to 3,932,000 bales in 1958, according to the 1960 edition of "Cotton Counts Its Customers," published by the National Cotton Council, Memphis, Tenn.

The detailed report covering some 400 end uses of cotton notes a market increase of more than three-quarters of a

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Kier Boiling	STAR	1:2.50	Specially clarified liquid
	METSO GRANULAR	Mol. Ratio 1:1	Sodium metasilicate pentahydrate
Detergent Operations	METSO GRANULAR	1:1	Sodium metasilicate pentahydrate
	METSO ANHYDROUS	1:1	Sodium metasilicate anhydrous
	METSO 99	3:2	Sodium sesquisilicate
	METSO 200	2:1	Sodium orthosilicate concentrated
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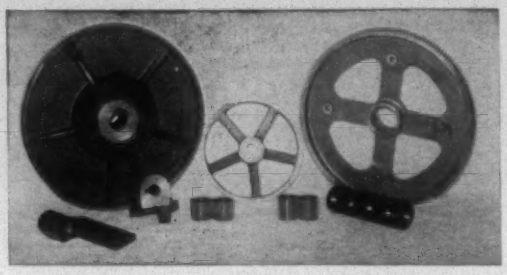


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million bales to make the 1959 total an estimated 8,398,000 bales.

The five largest end uses of cotton in 1959 in order of quantities consumed were: men's and boys' trousers, men's and boys' shirts, sheets, towels and toweling, and drapery and upholstery fabrics. Following are the actual quantities with 1958 consumption in that category shown in parenthesis and the percent of each total market taken by cotton in 1959 indicated: *Men's and boys' trousers*—815,000 bales (696,000), 78%; *Men's and boys' shirts*—696,000 bales (628,000), 90%; *Sheets*—489,000 bales (443,000), 99%; *Towels and toweling*—392,000 bales (365,000), 96%; and *Drapery and upholstery fabrics*—374,000 bales (345,000), 60%.

Men's and boys' apparel, with a total consumption of 2.6 million bales of cotton in 1959 as compared with 2.3 million bales in 1958, was the source of cotton's largest gain. Cotton's share of this market was 72% in both years.

Women's misses' and juniors' apparel accounted for 1.2 million bales as compared with 1.1 million in 1959. Cotton increased its share of this market to 43% from the 1958 share of 42%.

In children's and infant's apparel, the use of cotton rose to 654,000 bales from the 1958 total of 601,000 bales. Cotton's percent of the market remained at 77%.

Cotton consumption in household uses increased from 2.2 million bales to 2.4 million bales, while cotton's market share declined from 50% to 49%.

Consumption of cotton for industrial uses was up from 1.5 million bales in 1958 to 1.6 million bales in 1959 although cotton's share of the industrial market dropped from 26% to 24%.

June Cotton Consumption Up Slightly; Man-Made Fiber Staple Down From 1959

During the month of June 1960 the domestic textile industry consumed 857,772 bales of American-grown cotton; 8,685 bales of imported cotton; and 43,932,000 pounds of man-made fiber staple. During the period there were 20,004,000 cotton-system spindles in place; 19,325,000 of them were active, operating a total of 11,740 million hours.

Item	June 1960	May 1960	June 1959
ALL COTTON (Running Bales)			
Total Consumption			
United States	857,772	710,302	823,380
Cotton-growing states	826,921	682,052	789,723
New England	27,636	24,549	29,523
Daily Average Consumption			
United States	34,311	35,515	32,935
Cotton-growing states	33,077	34,153	31,589
New England	1,105	1,227	1,212
Stocks	8,281,905	9,523,618	9,282,578
FOREIGN COTTON			
Total Consumption	8,685	7,994	9,028
Stocks	37,832	41,934	46,521
MAN-MADE FIBER STAPLE (Thousand Pounds)			
Total Consumption	43,932	36,868	47,145
Stocks	37,661	39,468	54,377
COTTON-SYSTEM SPINDLES			
In place (thousands)	20,004	19,964	20,312
Active (thousands)	19,325	19,315	19,262
Hours operated (millions)	11,740	9,827	11,411

March Cotton Greige Goods Production Is Quadruple That Of Synthetic

According to the U. S. Bureau of the Census there were 328,000 looms in operation producing cotton greige goods at the end of March as compared with 78,000 looms pro-

ducing synthetic greige goods. Production of the cotton looms for the month of March totalled 943 million linear yards as compared with 223 million linear yards of synthetic greige goods. Some 10,000 looms were in operation producing 19 million linear yards of wool apparel fabrics in March. Unfilled orders at the end of March totalled 3 billion linear yards of cotton greige goods and 618 million yards of synthetic greige goods. Figures for the unfilled orders on wool apparel fabrics were not available.

Finishing plants finished 588 million linear yards of white and plain color cotton in March. Figures for print fabrics were not available. Some 192 million linear yards of synthetic fabrics were finished during the month. Backlog of cotton goods to be finished totalled 693 million linear yards at the end of March. Figures on finishers' backlogs of synthetic fabrics to be finished were not available.

Since this is the first report of its type published by the Census Bureau, comparison figures from March of 1959 are not available.

Nylon Tire Cord Production Gains On Rayon In Second Quarter

Production of tire cord and tire fabric during the second quarter of 1960 was 116.9 million pounds, according to the Bureau of the Census. This was an increase of less than 1% over the production during the previous quarter and the comparable period last year.

The output of rayon tire cord and tire cord fabric decreased 6% from the previous quarter's level to 64.7 million pounds. During the same period the production of nylon tire cord and tire cord fabric increased 14% to 41.2 million pounds. Cotton tire cord production for the second quarter totalled 8.8 million pounds as compared with 9.4 million pounds in the first quarter and 9.5 million pounds in the second quarter of 1959.

Stocks of tire cord fabric on July 2 were 49.5 million pounds, or 1% above the April 2 level and 3% more than the stocks on July 4, 1959.

The Census Bureau's summary for 1959 indicates that production of tire fabric in that year amounted to 469.6 million pounds as compared with 387.1 million pounds in 1958 and 448.7 million pounds in 1957.

The production of rayon tire cord and tire cord fabric amounted to 269.6 million pounds in 1959. This was 20% above the 1958 production of 248.3 million pounds but 5% below the 1957 level.

The output of nylon tire cord and tire cord fabrics amounted to 124.1 million pounds in 1959. This was 30% above the 1958 production and 43% higher than the production during 1957. During 1959 nylon accounted for 29% of the total output of tire cord and tire fabric (excluding chafer fabrics). This compares to 27% in 1958 and 21% in 1957.

Production Of Cotton Broadwoven Fabrics In First Quarter Up 4% Over 1959 Level

Cotton broadwoven fabric production in the first quarter of 1960 was approximately 2% above the previous quarter and 4% above the first quarter 1959 level. Production of sheeting and allied coarse and medium yarn fabrics was 5% above the previous quarter's level. Napped fabric output was approximately 20% above the previous quarter's level,

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Summary Of Production By Class Of Fabric
(Thousands of linear yards)

Type of Goods	January-March 1960 (preliminary)	October-December 1959	January-March 1959	Percent Change January-March 1960 from— October-December 1959	Percent Change January-March 1960 from— January-March 1959
Cotton Broadwoven Goods, Total	2,476,520	2,423,825	2,381,501	+ 2	+ 4
Duck and allied fabrics	56,433	56,716	56,435	—	—
Sheeting and allied coarse and medium yarn fabrics	672,285	639,953	628,267	+ 5	+ 7
Print cloth yarn fabrics	861,927	864,977	839,384	—	+ 3
Colored yarn fabrics	131,144	129,352	124,827	+ 1	+ 5
Towels, toweling and dishcloths	143,516	151,056	140,186	— 5	+ 2
Napped fabrics, blankets and blanketing	58,872	49,056	53,358	+20	+10
Fine cotton fabrics	430,191	410,193	404,838	+ 5	+ 6
Other woven cotton fabrics and specialties	122,152	122,522	134,206	—	— 9

while the production of all other fabric classes showed changes of —5 to +5% compared to the previous quarter.

1959 Report On Woolens And Worsteds Shows Further Drop In Number Of Spindles

In a summary of woolen and worsted machinery activity for 1959, the Bureau of the Census reports that woolen spinning spindles in place at the end of the year totaled 700,506. This represents a decrease of 3% from the December 1958 level and a 34% decrease compared to June 30, 1953. The 1959 figure reflects a 5% decrease in the number of woolen spindles at carpet and carpet yarn mills; a decrease of 3% was reported for other mills.

Worsted spinning spindles in place as of December 31, 1959, totaled 632,766—4% below the total for December 1958; and 62% below the 1,651,356 spindles that were in place on June 30, 1953.

There were 573,075 woolen and worsted spindles in place in New England at the end of 1959. This represented a decline of 5% from the number in place on December 31, 1958, and a 10% decline from December 1957. During this same period the number of spindles in place at mills in the Middle Atlantic and North Central states also showed declines.

In the Southern states, the number of woolen and worsted spindles in place totaled 479,284 on December 31, 1959, approximately the same number reported for 1958 and 2% above the 1957 total.

Increase Of 2% Reported In Production Of Man-Made Fiber Broadwoven Goods

Production of broadwoven goods of man-made fibers was 638 million linear yards during the first quarter of 1960. This was 2% above the fourth quarter output and 2% above the first quarter 1959 output. Rayon and acetate fabric production was approximately the same as the output during the previous quarter, and 7% less than the output during the comparable period of 1959.

1958 Census Of Manufactures Reflects Steady Decline Of Woolens & Worsteds

The downward spiral of the woolen and worsted segment of the textile industry is reflected in the 1958 Census of Manufactures report issued late in July by the Bureau of the Census. The report shows that between 1954 and 1958 the number of workers in the woolen and worsted industry declined 20%, from 62.5 thousand to 50 thousand. The number of establishments dropped 13%, from 265 to 232.

A Marketing Man's Outlook

(Continued from Page 100)

plant is now starting up and has a marketing plan which, if followed, should insure success.

Manufacturing, marketing and financing must all cooperate within the existing economic conditions for maximum success. While we recognize that one part cannot exist without the others, we do not necessarily recognize the consequence of one dominating the other nor the fact that the relationship among them changes constantly, sometimes radically.

From now on, so far as we can see, competition will become keener, not less, even though the textile capacity of the country is coming into better balance with consumption. The profitable operations will increasingly be those which use good market research and sound marketing. The mechanical technology of the textile industry is far ahead of its marketing ability. If we can expand markets for our textile products through modern marketing management, we will add to the profit potential of our industry and, in turn, enable the mills to modernize along lines indicated by market research, thus more effectively stimulating machine manufacturers to continue their efforts to develop the equipment needed in an ever-changing economy.

Summary Of Production By Class Of Fabric
(Thousands of linear yards)

Type of Fabric	January-March 1960	October-December 1959	January-March 1959	Percent Change October-December 1959 compared to— October-December 1959	Percent Change October-December 1959 compared to— January-March 1959
Man-Made Fiber Fabrics, Total	637,729	627,750	624,666	+ 2	+ 2
Rayon and Acetate Broadwoven Fabrics, Total	387,291	387,364	414,501	—	— 7
Blanketing	15,449	14,445	12,056	+ 7	+28
100% filament rayon and/or acetate fabrics	160,017	165,854	164,054	— 4	— 2
100% spun rayon and/or acetate fabrics	58,721	64,940	91,042	—10	—36
Combination filament and/or spun rayon andor acetate fabrics	28,525	27,134	34,272	+ 5	—17
Pile, upholstery, drapery, tapestry, and tie fabrics	52,365	48,870	46,805	+ 7	+12
All other rayon and/or acetate mixtures	72,214	66,121	66,272	+ 9	+ 9
Man-Made Fiber Fabrics, Except Rayon and Acetate	237,848	228,692	200,039	+ 4	+19
Silk and Other Broadwoven Fabrics, Not Elsewhere Classified	12,590	11,694	10,126	+ 8	+24

A little KALEX prevents a lot of metal contamination damage

Metal contamination entering your processing solutions from equipment or process water cannot be seen, but altered dye shades, discolored whites, excessive crocking, iron damage in bleaching, weakened action of your detergents and finishing chemicals caused by metal contamination are all too evident and costly.

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to the

Textile Manufacturing Industry



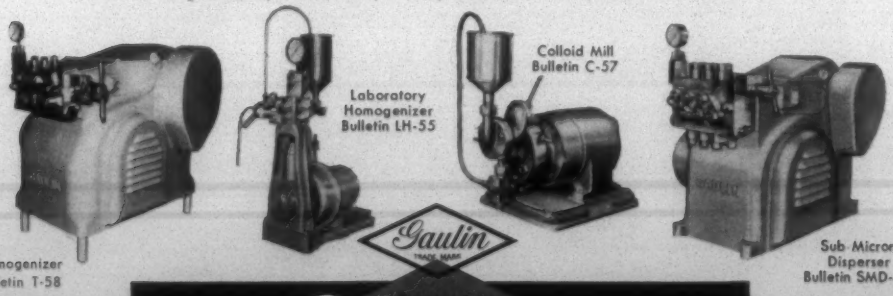
Mr. Lawson Hayes



Mr. John E. R. Hayes

Hayes Textiles Inc., with headquarters in Spartanburg, South Carolina will handle the sales program of Gaulin Textile Homogenizers and other Gaulin Equipment to textile manufacturing and finishing plants in Virginia, North Carolina, South Carolina, Georgia, Tennessee, Alabama, Mississippi, and Texas.

The Gaulin Staff with Mr. John E. R. Hayes and Lawson Hayes of Hayes Textiles Inc. will gladly discuss your problems at the 21st Southern Textile Exposition, Greenville, S. C., October 3 to 7. Booth No. 818.



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PERSONAL NEWS



Henry

R. Carter Henry has resigned as assistant general manager of the six plants in the Cotton Division of J. P. Stevens & Co. to enter the general investment business with Edgar M. Norris & Co., Greenville, S. C. A native of Greenville, Henry has held various positions over the past 25 years in the textile industry. After graduation from the Philadelphia Textile Institute, he advanced from weaver to his most recent post with Stevens. He has served as a trustee of P.T.I. and on the board of governors of the Southern Textile Association.

Warren Ramsdell has been named sales engineer in charge of the service and repair department of thet textile machinery division of Rodney Hunt Machine Co., Orange, Mass. Ramsdell has been with Rodney Hunt since 1953 and has been employed as a shop erector and outside erector for the textile machinery division.



Crumpton

Holt Associates Inc. has announced the addition of several members to its sales staff. Charles H. Crumpton, formerly with Springs Cotton Mills, Lancaster, S. C., will contact customers in South Carolina. He will make his headquarters in Lancaster. . . . H. Wayne West will contact firms in North Carolina and Virginia. He was formerly connected with Leesona Corp. . . . Charles



West



Dunn

M. Dunn will make his headquarters in Gastonia, N. C., and will contact customers in Gaston County and surrounding areas.

Promotions of three key men in its Thomaston Division have been announced by Thomaston (Ga.) Mills. Raymond D. Black was promoted to superintendent of carding and spinning. He had been overseer of the carding department. Black joined the company in 1915 as a cleaner. . . . John M. (Jack) Ormand, a textile engineer on the manufacturing staff, has been promoted to assistant superintendent of the division. He joined the company in 1954. . . . Carlton O. (Dick) Kinsler has been promoted from assistant overseer of the carding department to overseer of that department. Kinsler joined the company in 1930.

Hubert J. Watson has been named head of Watson-Williams Mfg. Co., Millbury, Mass. He will continue as general manager and treasurer. He succeeds his brother, Wilber L. Watson, who has retired after serving as president of the firm for 27 years.

George H. Hotte, director of the fiber marketing department of Allied Chemical, New York City, has been appointed to the Harold DeWitt Smith Medal awards committee of the American Society of Testing Materials.

Norman McClellan has been promoted from assistant overseer at its Unity Plant carding department to overseer of industrial yarn department at the Valway Plant by Callaway Mills Co., LaGrange, Ga. McClellan joined the company in 1955 following his graduation from Auburn where he received a B. S. in textile management. . . . James Thomas (Tommy) Gresham, recent graduate of Georgia Tech, has joined the company as a trainee at its Elm City Plant. . . . William P. Ironside has joined the company's engineering staff as a textile technologist. Ironside is a graduate of the Institute of Textile Technology in Charlottesville, Va., with an M. S. degree. . . . Rance Sprayberry has joined Callaway as time study man in job standards. Sprayberry is a June graduate of LaGrange College with a degree in business administration.



Gregg

E. Haines Gregg has been elected executive vice-president and treasurer of A. B. Carter Inc., Gastonia, N. C. Gregg formerly was secretary and assistant treasurer. . . . O. L. Peach, former assistant secretary, was elected secretary and assistant treasurer. . . . A. Dewey Carter was re-elected president and J. Bynum Carter was re-elected vice-president. A. Dewey Carter previously held both the presidency and the office of treasurer.

Edward G. Hochberg has joined the Pellon Corp., New York City, as industrial market developer and sales engineer. A member of American Marketing Association and an instructor of marketing at the Fashion Institute of Technology, Hochberg received his B. S. at Lowell Tech and his M. B. A. at the Graduate School of Business of New York University.

E. Carl Snyder has been named manager of sales-service for the industrial division of Corn Products Sales Co., New York City. In his new post in the company's New York headquarteers, Snyder heads a nationwide staff of sales-service field men who furnish technical assistance to users of the company's products.

R. W. Daniels has been named manager of services for the organic chemicals division of American Cyanamid Co., New

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York City. As manager of services, Daniels will have responsibility for co-ordinating all activities of the division's purchasing, legal, public relations, traffic, personnel services and general services departments. He will be located at division offices in Bound Brook, N. J. . . . John M. Fasoli has been appointed manager of commercial operations for the organic chemicals division. In his new capacity, Fasoli will be responsible for co-ordinating activities of the division"s commercial departments which include dyes, textile chemicals and intermediates. He will also be located at division sales offices in Bound Brook, N. J.



Huey

R. B. Huey has been assigned to the home office of The Goodyear Tire & Rubber Co.'s chemical division. Huey joins the polyester products department as senior sales engineer and will be concerned primarily with Vitel polyester resins produced for synthetic textile fibers. He is a graduate of Clemson College with a B. S. degree in textile chemistry.

Joseph G. Shedd has been named superintendent of the Alabama Division of Dan River Mills Inc. Shedd, who will make his headquarters in Montgomery, Ala., succeeds Louis DeLoach. He was formerly a manufacturing executive with Dan River. From 1941 to 1947, he was first a mill superintendent and later division superintendent of the company's plain goods division in Danville, Va. Prior to rejoining Dan River, he was vice-president and general manufacturing manager of Fulton Cotton Mills, Atlanta, Ga.

William Holt Jr. has beeen named executive vice-president of Cramerton (N. C.) Mills of Burlington Industries. Holt has served as head of manufacturing operations at Burlington's Mooresville (N. C.) Mills for the past ten months. . . . Strother E. Murdock succeeds Holt as head of the Mooresville operation.

Anthony D. Borreli has been transferred from the Raeford, N. C., plant of Pacific Mills, member of Burlington Industries, to Pacific's Oxford (N. C.) Worsted Mills. He succeeds Ray Griffin, who has joined Dixie Mercerizing Co., Chattanooga, Tenn.

Jack Leach has been named technical director of Burlington Industrial Fabrics Co., New York City. As technical director, Leach will be in charge of all research and development activities within the company's product development department. Leach has been associated with Burlington Industrial Fabrics in a product development capacity since 1956 and in a similar capacity with Burlington Industries, the parent company, since 1949. Burlington Industrial Fabrics is a major producer of fabrics of man-made fibers and blends for varied industrial applications.

Elliot Nelson has been named senior research and development chemist in the textile pigment research and development laboratories of Geigy Dyestuffs Division of Geigy Chemical Corp., Ardsley, N. Y. Nelson has had wide experience in water-in-oil and oil-in-water pigment printing emulsion colors and auxiliaries. Prior to joining Geigy, he was associated with the Ansbacher Siegle Division of Sun Chemical Corp. and the textile color division of Interchemical Corp.

Raymond B. Murray Jr. has joined Southeastern Loom & Machine Works, Greenwood, S. C., as senior methods engineer. Murray is a graduate of North Carolina State College and was previously connected



Murray Allen

with Saco-Lowell Shops. . . . Everett W. Allen has been named chief engineer of Southeastern. Allen was previously assistant general manager of Precision Gear Co.

John Edward Crofton has joined the Callaway Mills Co., LaGrange, Ga., as a trainee and has been assigned to the Unity Plant office. Crofton is a 1958 graduate of Auburn University where he received his B. S. degree in business administration. . . . Wallace Weeble has joined Callaway as a trainee at the Unity Spinning Plant. He is a June graduate of Georgia Tech with a bachelor of textile engineering. . . . Thomas Munn has joined the company as assistant overseer of finishing at the Hillside Plant in LaGrange. Prior to joining Callaway, Munn was assistant overseer of dyeing at the finishing plant of Excelsior Mills in Pendleton, S. C.

Reid Williams has been named general superintendent of Pacolet Mills, Gainesville, Ga. Williams was formerly superintendent of the Cannon Mills Co. plant in York, S. C. Pacolet is a member of the Deering Milliken group of mills.

James V. Daniels has been named salesman for the Eastern region by Jefferson Chemical Co., Houston, Tex. Prior to joining Jefferson, Daniels was employed at the Houston and New Orleans offices of Shell Oil Co. Previously he had been associated with Humble Oil & Refining Co. at Snyder, Tex.

Carl H. Swan Jr. has resigned as president of Craftspun Yarns Inc., Kings Mountain, N. C. Swan did not announce his future plans. The firm, which is a wholly-owned subsidiary of the Scranton (Pa.) Corp., will be managed by an executive committee.

Joe E. Spearman has been named technical representative for the Textile Chemical Division of the Jordan Mfg. Co., Philadelphia, Pa.

Charles P. Eberling has been named president of Forstmann Inc., subsidiary of J. P. Stevens & Co., in charge of women's wear, merchandising and sales. Eberling has

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been associated with Stevens since 1954 and until now has been merchandising supervisor of several women's wear departments in the woolen and worsted sales division. Forstmann produces woolens and worsteds. . . . James Yuill, former president of Forstmann, has resigned. Yuill joined the company in 1950 as director of advertising, marketing and public relations. In 1956 he was named vice-president in charge of the Greenville, S. C., area. In 1959 he was named president and director of Forstmann in charge of merchandising Forstmann's women's wear and over-the-counter fabrics.

Charles D. Hemphill, head of the billing and shipping department of Cannon Mills Co., Kannapolis, N. C., has been named assistant vice-president of the company. Hemphill joined Cannon in 1937 as detail clerk in the billing and shipping department.

A. B. Lee has been named overseer of weaving at Laurens (S. C.) Mills. Lee previously held a similar post at the Columbus (Ga.) Mill Division of West Point Mfg. Co.

Indian Head Mills, New York City, has realigned its top executive responsibility by the naming of two vice-presidents to two newly-created posts. James M. Flack has been named group vice-president in charge of the Linen Thread Co., Franklin Process Co., and the greige and industrial fabrics division. Flack has been an officer of the company since its establishment in 1953. Previously he was a vice-president of Textron Inc. in charge of a group of cotton mills. He will make his headquarters in Spartanburg, S. C. . . . Charles O. Wood has been named group vice-president in charge of operations of the finished goods division, Bernhard Ulmann Co., Hoosac Mills and USF-Arnold Finishing Co. Wood, who also joined the company as an officer in 1953, was formerly general manager of the cotton division of Textron Inc. He will make his headquarters in the company's executive offices in New York City.



Beardsley

Edward W. Beardsley has been appointed Southern regional vice-president of the industrial division, Corn Products Sales Co., New York City. In his new post, Beardsley will make his headquarters in Atlanta, Ga. He joined Corn Products in 1935. Prior to his promotion he was assistant Western regional manager.

James Little, superintendent of Blair Mills Inc., Belton, S. C., has been named president of the Belton Lions Club.

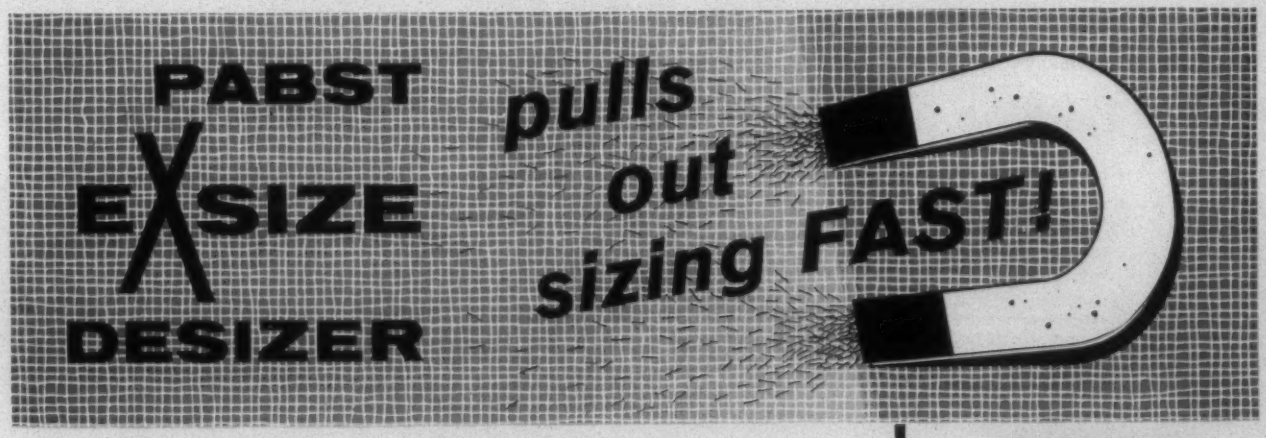
Rodney Graham has resigned as plant superintendent of Santee Print Works, Sumter, S. C., in order to assume the presidency of the Printed Fabrics Corp., Carrollton, Ga., a screen printing plant which is a division of Meade & Montague of New York City. Graham had served as plant superintendent of Santee for the past ten years.

George P. McClenaghan, vice-president in charge of the cotton division of J. P. Stevens & Co., is reported to have improved following a recent heart attack and cerebral thrombosis. His condition was previously reported as serious. McClenaghan is current president of the South Carolina Textile Manufacturers Association.

Met R. Poston has been elected secretary and assistant general counsel of American Enka Corp., Enka, N. C. Poston was formerly assistant secretary.

Warner Eustis, vice-president for research at The Kendall Co., Boston, Mass., has retired after 33 years with the company.

Six new appointments to positions within its applications research and service department have been announced by the Chemstrand Corp., Decatur, Ala. They are: Joseph C. Reno, C. Murphy O'Shields, J. P. Kimbrell Jr., Larry L. Crooks, James L. Dockery and Robert J. Robinson Jr. . . . Reno is in dyeing and finishing service. Prior to joining Chemstrand, he was a production dyer with Orinoka Mills at Philadelphia, Pa., for 10 years. He attended the Philadelphia Textile Institute. . . . O'Shields is in textile processing. He is a native of Seneca, S. C., and worked with Gerrish Milliken Mill, Pendleton, S. C., and Owens Corning Fiberglas, Anderson, S. C., before joining Chemstrand. . . . Kimbrell is in dyeing and finishing, applications research. He is a graduate of the University of Alabama and was previously with Gulf States Paper Corp. at Tuscaloosa, Ala. . . . Crooks is in dyeing and finishing, applications re-



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search. He formerly was associated with Deering Milliken Research Corp. at Spartanburg, S. C. He attended Clemson College. . . . Dockery is in Acrilan technical sales service. He formerly was associated with Dan River Mills at Aliceville, Ala., and Avondale Mills at Alexander City, Ala. Dockery is a graduate of Auburn University. . . . Robinson is in dyeing and finishing service. He is a recent graduate of New Bedford Institute of Technology in textile chemistry.

Joe M. Glenn and A. Albert Molnar have been named sales engineers for the textile machinery division of Saco-Lowell Shops. Glenn, a graduate of Clemson College, will work out of the company's Charlotte office. For the past five years he has been a sales engineer in the Georgia-Alabama district for the Bouligny Co. Molnar,



Glenn



Molnar

formerly service co-ordinator at Saco-Lowell's Easley, S. C., plant, has been transferred to the Atlanta sales territory. He joined Saco-Lowell as an apprentice in 1941. In 1948 he was assigned to specialized service on worsted equipment, subsequently being attached to the Charlotte office servicing roving, drawing and spinning. He was named Greensboro district service manager in 1953, and was promoted to service co-ordinator for the entire textile machinery division in 1958. In his new appointment he will succeed M. Earl Heard Jr., who was recently named assistant to the vice-president of the Saco-Lowell International Division. . . . Succeeding Molnar as service co-ordinator is Benjamin J. Zalkind, formerly consulting engineer in the product engineering department at Easley. He rejoined Saco-Lowell a year and a half ago after previously having been with the company for 18 years in research and development at Biddeford, Me. He left the company in 1948 to become president and general manager of the Normandie Mill, Nashua, N. H. Since that time he has also been associated with Kanmak Mills, Manchester, N. H., and at National Worsted Mill, Jamestown, N. Y. A graduate of Lowell Tech, Zalkind has written widely on textile processes and textile machinery, and is known for a number of textile machinery developments.



Zalkind

John G. Gravlee Jr. has been named executive in charge of Burlington Throwing Co. operations, succeeding Joseph H. Hamilton, who has resigned to purchase interest in Baldwin Processing Co., a throwing and yarn dyeing and processing operation at Milledgeville, Ga. Gravlee, who has been a vice-president of Burlington Throwing since June 1959, will make his headquarters at the Hillcrest Plant in High Point, N. C. He joined Burlington Industries, parent firm of Burlington Throwing Co., in 1955.

Election of three vice-presidents and a new director has been announced by the board of directors of Burlington Industries. James L. Eskridge has been named a vice-president and will be responsible for the operation of a number of Burlington divisions. . . . James D. Barbee, president of Cramerton (N. C.) Mills, a Burlington manufacturing division, has been made a vice-president and will be transferred to Greensboro, N. C., to assume duties as a manufacturing executive and as a member of the company's operations committee. . . . John B. Russell Jr. was named a vice-president of the company. He currently has broad sales and merchandising responsibilities for a number of Burlington Industry divisions. His headquarters are at the company's sales and merchandising headquarters in New York City. . . . Harry L. Dalton was named a director of the company. He recently retired as vice-chairman of the board of American Viscose Corp.

T. D. Lewis Jr. has been named product manager of the Belfast self-ironing fabrics division of Deering Milliken Research Corp. His office will be at the research corporation's building in Spartanburg, S. C. His duties will include co-ordination of the research, promotion, sales and product development phases of the Belfast fabrics program.

George Friedlander is retiring as president of the Duplan Corp. on September 30. Friedlander joined the company as a trainee in 1919. He was made a director in 1933. In 1945 he was named a vice-president and in 1955 became president of the firm.

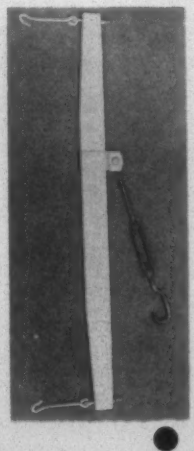
Bruce Kenworthy has joined The Chemstrand Corp., New York City, as a carpet merchandising specialist. Prior to joining Chemstrand, Kenworthy served as marketing co-ordinator and Northeastern representative for Bigelow Sanford Inc., Hartford Fibres Division.



Wilson

Albert S. Wilson Jr., vice-president in charge of sales of Aberfoyle Mfg. Co., Philadelphia, Pa., was elected president of the company at the annual stockholders meeting. Wilson succeeds Joseph P. Holt, who has resigned after 48 years with the company. Wilson joined Aberfoyle in 1944 to take charge of modernization of the firm's Rex Mills in Gastonia, N. C. In 1950 he was named general manager of all Aberfoyle plants in the U. S. Three years later he became vice-president-sales, with headquarters at the company's offices in New York City. He will continue to make

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Coker, Dunlap

CAP'N DUNLAP—The board of directors of Sonoco Products Co., Hartsville, S. C., recently presented a handsome silver punch bowl to C. K. Dunlap, retired company vice-president, in appreciation for his 44 years of service to the firm. He built Sonoco's first paper machine, its first modern power plant and its cone department. In the course of his career he designed and patented more than 40 machines used in the conversion of paper to cones, tubes and cores. He was also responsible for many innovations in the converted paper industry, including the now famous 3°30′ cone used by the textile industry for winding synthetic yarns. James L. Coker, president of Sonoco, presented the silver bowl.

his headquarters in New York. . . . J. S. Kenrick, vice-president of Aberfoyle, has been named senior vice-president in charge of marketing. . . . Three new vice-presidents have been named by the company: W. T. Galey, vice-president-finances; E. J. Neal, vice-president-operations; and H. D. Whitener, vice-president-manufacturing. Galey had been company treasurer. Neal was formerly president of Aberfoyle's Rex Mills Division in Gastonia, N. C.; and Whitener was vice-president and general manager of Rex Mills. . . . A. S. Robinson, treasurer of Rex Mills, was elected treasurer of Aberfoyle.



Harris

Boyce Harris has joined Southern Gear Works of Gastonia, N. C., as sales engineer. From headquarters in Gastonia, Harris will call on mills within a 100-mile radius. He was formerly with Pneumafil Corp. Prior to that he was associated with Southern Engineering Co. and Cocker Machine & Foundry Co. Southern Gear Works specializes in industrial cut gears and chain drives.

Aaron Begum of Crompton & Knowles Corp., Worcester, Mass., has been named president of the Textile Associates Club at that group's recent meeting in Wickford, R. I. . . . Fred A. Vogel of H. F. Livermore Corp., Boston, was named secretary and treasurer of the group.

Robert H. McDonald, long-time assistant to the plant manager of Winnsboro (S. C.) Mills of the U. S. Rubber Co., retired recently after almost 38 years with the company.

Thomas M. Ripley, technical service representative for American Cyanamid Co.'s fibers division, has been transferred from New York to the Charlotte, N. C., office. A specialist in fiber processing operations, Ripley joined the company at the beginning of this year, coming from Klopman Mills, where he was for two years general overseer of spinning at the Ramseur, N. C., worsted mill.

Erwin G. Walker has been named to the newly-created post of sales manager for the South for the fibers division of American Cyanamid Co., New York City. He will transfer to Cyanamid's sales office in Charlotte, N. C., effective September 15. The post of sales manager for the South is being established as the result of the need for increased service in this important textile area and expanding sales of Creslan acrylic fiber, the company announced.



Fields

Frank P. Fields has been named to the sales staff of Arnold, Hoffman & Co., Providence, R. I. He will operate out of the company's sales office in Charlotte, N. C. Fields was appointed to assist in handling the growing number of textile accounts which Arnold, Hoffman services throughout North and South Carolina. Prior to joining Arnold, Hoffman, he was a supervisor of dyeing and finishing at Mooresville (N. C.) Mills, a division of Burlington Industries. He is a member of the Piedmont Section of the A.A.T.C.C.

Donald P. Feyler has joined the staff of the textile development department at AviSun Corp., Philadelphia, Pa., as a specialist in end dyeing and finishing. AviSun, a producer of polypropylene polymer, film and fiber, is the equally-owned subsidiary of American Viscose Corp. and Sun Oil Co. Feyler has been a member of the dyeing and finishing division staff of the technical and textile service department at American Viscose for the past six years.

James P. Williams has been named superintendent of the Dixie Mills Division of West Point (Ga.) Mfg. Co. Williams joined Dixie in 1929 in the weaving department. In 1952 he was named production manager and became assistant superintendent in 1953.

OBITUARIES

Earl G. Bagley, 52, manager of the Dixie Mill Division of West Point Mfg. Co., died August 1. Mr. Bagley had been with the mill since 1925. He was named assistant superintendent in 1946 and superintendent in 1952. He was promoted to manager in 1958 when the mill became a part of West Point Mfg. Co. At the time of his death he was serving his third term as a member of the LaGrange city council. Survivors include his widow, a daughter and two sons.

Otis H. Coggins, 66, retired paymaster of Woodside Mills, Greenville, S. C., died July 28 after several years of declining health. He served as paymaster at the mill for 33 years.

Otto C. Haufe, 68, a director of the Turner Halsey Co., died in Millbrook, N. Y. August 9. Mr. Haufe was a pioneer in the application of spun synthetic fibers to the textile field and had been closely identified with the American system of wool fiber spinning. Survivors include his widow, three sons and two daughters.

Harry Price, 66, retired vice-president of Celanese Corp. of America died in West Palm Beach, Fla., August 14. Mr. Price joined Celanese in 1926. In 1939 he was named yarn sales manager and in 1945 he became vice-president. His widow, two daughters and two sons survive.

Richard H. Rabbitt, executive vice-president of Jordan Mills, Columbus, Ga., died recently. Rabbitt joined Jordan Mills in 1932. He is survived by a daughter.

Frank L. Robbins, 91, former president of the old Matoaca Cotton Mills in Chesterfield, Va., died recently. Mr. Robbins was also at one time connected with Kessler Cotton Mills, Salisbury, N. C., as secretary and treasurer. A son and a daughter survive.

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MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

KNOXVILLE, TENN. — Jefferson Woolen Mills is undergoing a program of complete modernization of production equipment. At present the picking, carding and spinning departments are in the midst of modernization. Later the weaving, finishing and shipping departments will be modernized. When the program is completed, the plant should employ between 400 and 500 persons, the company reports. The entire program is expected to take better than a year.

FAIR LAWN, N. J.—Fair Lawn Finishing Co. recently ceased operations as the last of its orders were run out. The plant is being liquidated unless a buyer can be found. If the liquidation process goes through, the equipment will be sold separately and the property rented.

NEW YORK, N. Y.—Riegel Textile Corp. reports net income of $1.9 million on sales of $71.6 million in the 40 weeks ended July 9 as compared with net income of $1.1 million on sales of $71 million for the corresponding 40 weeks of 1959.

BALTIMORE, MD.—Mount Vernon Mills reports a 13% decline in sales and a 15% decline in net earnings for the six months ended June 30. Earnings for the period were $418,000 on sales of $19.7 million as compared with earnings of $491,000 on sales of $22.5 million in the comparable six months of 1959. Earnings for the period were reduced by special charges incident to the liquidation of properties and inventories at Newnan, Ga. A general slackening in demand was blamed for the drop in sales. While noting that its unfilled order position has dropped, the company said that third-quarter earnings should approximate those for the same period last year.

ELKIN, N. C.—Officers of the Chatham Mfg. Co. here gave employees a picture of the company's operation at its semi-annual business meeting recently. Employees were told that during the first six months of this year the company produced more goods than at any time in its history. But, it was added, increased costs of production and higher wages have taken their toll of profits. Cautious optimism was voiced about the last six months of the year.

NEW YORK, N. Y.—Indian Head Mills has agreed to purchase all the plants and inventories of the Bachmann Uxbridge Division of Amerace Corp. Terms of the sale were not disclosed. Bachmann Uxbridge became a part of Amerace in 1957 when a three-way merger including also American Hard Rubber Co. and the Wardell Co. resulted in the formation of the Amerace Corp. Acquisition of the firm by Indian Head marks the latter firm's entry into the woolen goods business.

SPRAY, N. C.—Fieldcrest Mills has purchased all machinery and equipment of Greenville (N. C.) Mills and has taken over ownership and operation of the unit. The acquisition will strengthen Fieldcrest's Karastan Rug Mill operation in several ways. The plant will be known as Fieldcrest Mills Inc., Karastan Spinning Division. This mill has been a subsidiary of Artloom Industries Inc., and its parent company Trans-United Industries Inc., and was established by Artloom in 1950 for the manufacture of carpet yarns, both wool and synthetics, on the woolen system. The machinery is housed in a building of approximately 100,000 square feet which is rented from a private owner on a long term lease. Henry F. Norris, general manager of the Frank S. Nelson Co. of Philadelphia, will join the Fieldcrest operation at Greenville as mill manager, with responsibility for plant operations and purchasing of carpet wools. Vernon E. Howell, who has been local manager at Greenville for Artloom will continue at Fieldcrest as plant superintendent. The Greenville machinery consists of 14 sets woolen cards, 2,560 woolen spindles, 900 spindle trap twisters, and all necessary auxiliary equipment, including a complete raw stock dyehouse. The plant employs 350 people. The purchase agreement includes a provision whereby Fieldcrest will continue to supply the Artloom mill with yarn, the balance of the production going to Fieldcrest's Karastan Rug Mill at Leaksville, N. C.

GREENSBORO, N. C.—Cone Mills Corp. has reported consolidated net sales of $103 million and net earnings of $2.9 million for the first half of 1960 as compared with sales of $99.8 million and net earnings of $2.6 million in the first half of 1959.

BOSTON, MASS.—Pepperell Mfg. Co. reports net operating income of $3.5 million on sales of $100 million for the year ended June 30. This compares with net operating income of $2.5 million on sales of $92.9 million for the previous year. The company reported that its unfilled order position is satisfactory even though slightly lower than a year ago.

WEST POINT, GA.—West Point Mfg. Co. has let a contract for the construction of a central warehouse with an adjacent office building for the cotton department. The cost of the two buildings and equipment is expected to be approximately $631,000. Space now occupied by the cotton department in the general office building of the company in West Point will be used by personnel of the production-planning function now located at the Wellington Sears Co. offices in New York City. The warehouse will contain eight fireproof storage compartments with 10,000 square feet each.

GREENSBORO, N. C.—The formation of Burlington International A. G., Glarus, Switzerland, has been announced by Spencer Love, chairman and president of Burlington Industries Inc. According to Love the growing potential of the European textile markets led to the formation of the new company which will study market and fabric conditions, and undertake broad exploration of such operational opportunities as may evolve. Walter E. Greer Jr. has been named president of Burlington International, and will direct all international operations, including the new Swiss subsidiary. In addition to these duties Greer will continue in his present duties as a senior vice-president and member of the Burlington executive committee.

DANVILLE, VA. — Dan River Mills Co. has been awarded a contract calling for 335,000 linear yards of blue cotton oxford cloth at $132,911.30 from the Military Clothing & Textile Supply Agency of the Philadelphia Quartermaster Center.

GREENSBORO, N. C. — Consolidated net sales of $688.5 million for the nine months ended July 2, were reported by Burlington Industries Inc. as compared with consolidated net sales of $581.6 million in the corresponding period of 1959. Net earnings for the nine months were $28.8 million after deducting income taxes of $30.9 million and minority interests in earnings of $720,000. After preferred dividends, net earnings were equal to $2.31 per share on the 12,031,578 common shares outstanding at the end of the period. Net earnings for the comparable nine months of 1959, were $18.3 million after deducting income taxes of $19.6 million and minority interests in earnings of $601,000. The consolidated net sales and net earnings for the nine-month period

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ended recently include sales and net earnings of James Lees & Sons Co. which were not included in the results for the comparable nine months of 1959.

NEW YORK, N. Y.—United Merchants & Manufacturers Inc. has placed an order for more than $750,000 with Whitin Machine Works, Whitinsville, Mass., for a partial changeover in its existing drafting systems in mills in Buffalo and Union, S. C. The changeover will be made to 464 frames, about equally divided between the two plants. It will give the two plants a modern drafting system utilizing the Whitin-STA system.

BOILING SPRINGS, N. C.—The machinery and plant of Dover Yarn Mills here has been leased by the Massachusetts Mohair Plush Co., Neisler Division, Kings Mountain, N. C.

PHILADELPHIA, PA.—The Military Clothing & Textile Supply Agency of the Philadelphia Quartermaster Center has awarded two contracts for cotton sheets. Contractors, quantity and dollar value are: B. I. Cotton Mills, Greenville, S. C., division of Burlington Industries, 26,000 at $45,117.80; and Indian Head Mills, New York City, 86,500 at $146,514.85.

DURHAM, N. C.—Erwin Mills Inc. reports lower sales but higher earnings in the nine months ended June 30. Net profits for the period were $1.7 million on sales of $48.8 million. This compares with earnings of $926,000 on sales of $52.1 million in the corresponding nine months of 1959. For the three months ended June 30, net earnings were $569,000 on sales of $17.9 million. This compares with earnings of $488,000 on sales of $18.4 million in the same three months of 1959.

SYLACAUGA, ALA.—Avondale Mills here reports earnings of $1.5 million or $2.39 per share for the 40 weeks ended June 5. This compares with earnings of $1.26 per share in the comparable period of 1959.

MARION, N. C.—Clinchfield Mfg. Co. of the B. I. Cotton Mills of Burlington Industries has installed a 660-ton refrigration unit at its No. 1 Mill here. The installation is in line with the company's conversion of the mill to the production of fine combed fabrics. The refrigeration unit conditions the two spinning rooms, the card, picker, spooler and cloth rooms. New machinery includes nine high-sped combers and new Saco-Lowell drawing; 160 new 50-inch Draper looms; and Curtis & Marble inspecting frames lighted by ground glass reflectors for cloth inspection. The conversion will necessitate the expenditure of more than $1 million. Mill No. 2 will continue to make carded print cloth. When the No. 1 Mill is in full production on combed goods, Clinchfield's output will be geared for 350,000 yards weekly in combed fabrics and 500,000 yards weekly in print cloth.

FOREST CITY, N. C. — Designer Yarns Inc., a novelty yarn firm has been established here by Carl H. Swan Jr. Swan was previously president of Craftspun Yarns Inc., Kings Mountain, N. C. The Forest City mill was formerly owned and operated by the late Henry F. Thomas and manufactures natural and synthetic yarns.

BOSTON, MASS. — The Kendall Co. has ben awarded a contract by the Military Clothing & Textile Supply Agency of the Philadelphia Quartermaster Center calling for 773,000 linear yards of cotton cheesecloth at $77,736.12.

MONCKS CORNER, S. C. — Berkshire Woolen Co. is closing its plant here upon completion of orders. The mill, which employed 100 persons at peak operation, has 960 spindles and 24 looms. The company, which has headquarters in Pittsfield, Mass., is liquidating all corporate assets. It has been losing money for some time, it was reported.

NEW YORK, N. Y.—M. Lowenstein & Sons Inc., Raymond F. Clark and Jack P. Schwebel have announced the formation of Clark-Schwebel Fiber Glass Corp. to engage in the weaving, finishing and marketing of industrial and decorative glass fabrics. The activities of the new corporation will mark the entry of M. Lowenstein & Sons into the glass field. Clark-Schwebel will have executive and sales offices in New York and will function as an independent affiliate of Lowenstein.

WEST POINT, GA.—The West Point Mfg. Co. has been awarded a contract by the Military Clothing & Textile Supply Agency of the Philadelphia Quartermaster Center calling for 89,000 yards of cotton terry cloth at $69,219.90.

CHERAW, S. C.—Delta No. 2, J. P. Stevens & Co.'s new plant here for the finishing of blended fabrics, went into production in mid-July. Formal dedication of the plant is planned for the Fall. The plant has about 250,000 square feet of space and cost over $3 million. It is handling the synthetic blends production of the company's Victor and Greer, S. C., plants. Most of the machinery and personnel in the new facility were transferred from the synthetics section of another plant. Clyde T. Moore, manager of the synthetic division at Delta No. 3, will manage the new plant.

WHITEHALL, GA.—White Hall Mills has placed an order with Whitin Machine Works for two Whitin American system Monarch spinning frames.

DANVILLE, VA.—Dan River Mills had net earnings of $3.7 million on sales of $85.9 million for the six months ended July 2 as compared with earnings of $2.7 million on sales of $85.1 million in the comparable period of 1959. For the quarter ended July 2 earnings were 40 cents per share as compared with 30 cents per share in the same quarter of 1959. The company's unfilled order position currently compares favorably with the backlog of unfilled orders at this time last year.

PICKENS, S. C.—Pickens Mill here will install 96 new 50-inch Draper looms as part of a $300,000 expansion program. The mill now operates some 638 looms of the 40-inch width and turns out unbleached sheeting. The three-story mill will be expanded to four floors by the excavation of a basement. Completion of the program is expected in September.

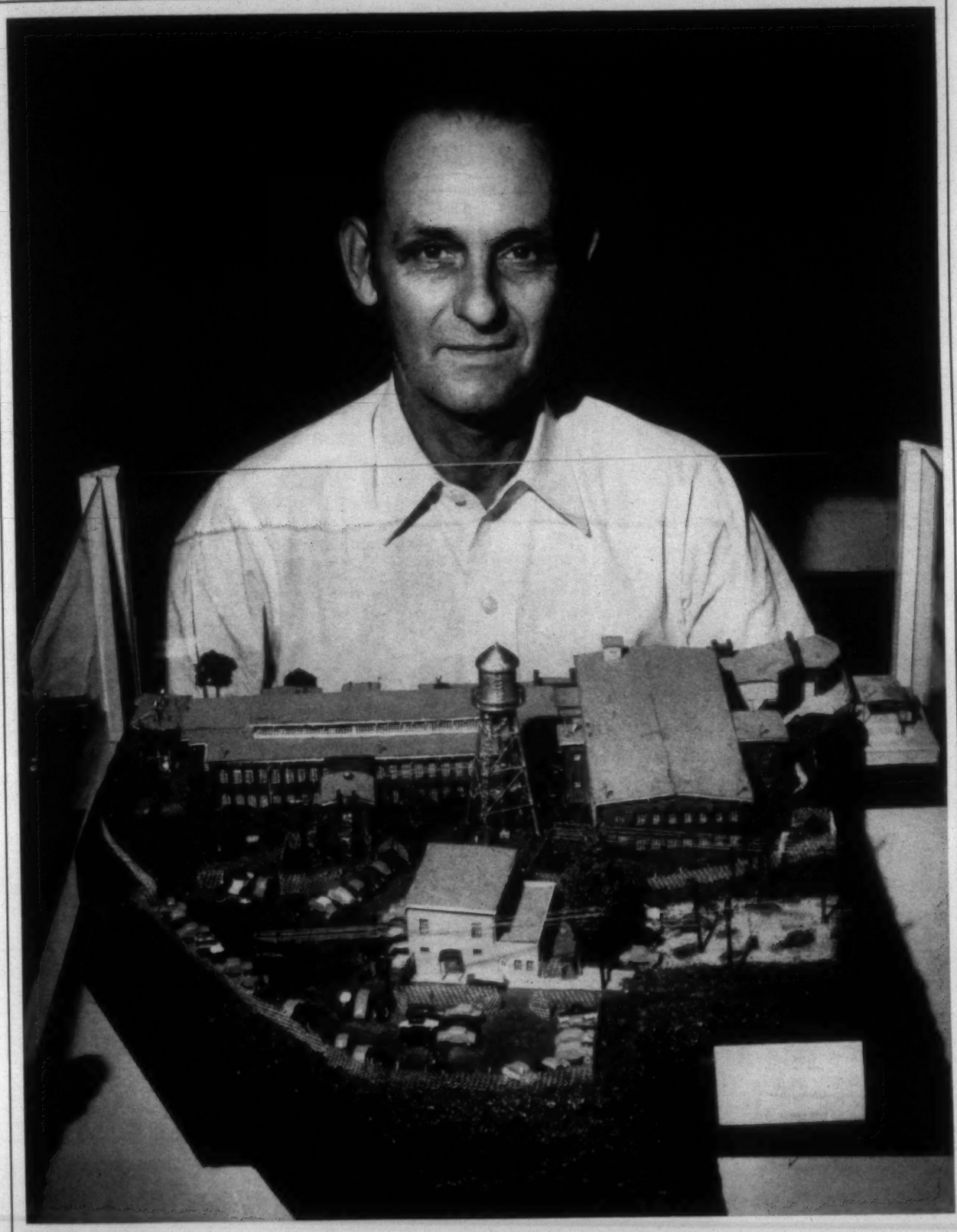
LEXINGTON, S. C.—The Red Bank Mill here has been purchased from the Textile Banking Corp. of New York by The Textile Processing Corp. of Augusta, Ga., it is reported. Red Bank is equipped with 14,016 spindles and 254 looms and produces corduroy.

CHESTER, S. C.—The Schlegel Mfg. Co., Rochester, N. Y., specialists in narrow-loom industrial weaving, will open a new 55,000-square-foot factory and distribution center here. The South Carolina facility will begin operations in October, manufacturing a complete line of plastic webbings for lawn furniture and similar products.

BOSTON, MASS. — The Kendall Co. recorded net earnings of $1.2 million for the second 12 weeks of 1960 compared with $1.3 million for the same period of 1959, which included non-recurring gains from the sale of plant properties. Sales of $26.2 million for the 12-week period continued a high level and exceeded the sales of $25.9 million for the same period in 1959. Kendall stockholders have approved a two-for-one stock split.

NEW YORK, N. Y.—M. Lowenstein & Sons reports doubled earnings and higher sales in the first half of 1960 as compared with the first half of 1959. Earnings for the first half, ended June 30, were $1.9 million on sales of $222 million. The company reports that its unfilled order position is still good. Many of its mills are said to have entered the Summer period with higher backlogs than a year ago. Unfinished cloth production is sold up to the extent that the company has very few greige goods for sale for the balance of the year.

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Model Mill — This scale model of Abney Mills' Poinsett Mill at Greenville, S. C., is complete in every detail, even to the cars in the parking lot. It was built by Odell Barbery, who has been a section man in the Poinsett spinning room for 27 years. He worked on it off and on for almost a year, using such materials as match stems, straight pins, window screen, balsa wood, toothpicks, artificial grass, emery cloth, piano wire, thread, plastics, water putty, pasteboard, linoleum, wood glue and paint. Mr. Barbery plans to have it on display at the Greenville Textile Show October 3-7.—*(Photo made available through the courtesy of Abney Mills)*



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TEXTILE BULLETIN is devoted to the dissemination of information and the exchange of opinion relative to the spinning and weaving phases of the textile industry, as well as the dyeing and finishing of yarns and woven fabrics. Appropriate material, technical and otherwise, is solicited and paid for at regular rates. Opinions expressed by contributors are theirs and not necessarily those of the editors and publishers. ¶ Circulation rates are: one year payable in advance, $1.50; two years payable in advance, $2.00; one year, Canada, $3.00; one year, other countries in Postal Union, $5.00; single copies, 25 cents. ¶ A companion monthly journal, THE KNITTER, is published by Clark Publishing Co. and devoted to the interests of the knitgoods manufacturing industry.

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The Greenville Show

THE twenty-first edition of the Southern Textile Exposition opens in Greenville October 3, and the BULLETIN hopes you are among the thousands making plans to attend. Beginning on Page 57 of this issue is a run-down on what we have been told will be displayed. It's as complete a listing as we were able to compile by press time, and we're grateful to those exhibitors whose co-operation enabled us to bring you this advanced peep through the keyhole.

As official registrars for the Greenville Show, the BULLETIN is hoping you'll find favor with the new system of registration officials of Textile Hall Corp. are incorporating at this year's show. Admittance to the show will be by badge only. And a single badge will get you in and out of Textile Hall all week long. This does away with the former necessity of filling out an admission card each time you enter the hall. We hope you'll find it a real time saver.

Members of the BULLETIN staff will be on hand throughout the week in Booth 203. We'd be flattered to have you drop by.

Are The Odds In Your Favor?

IN view of warnings from some quarters concerning the dire possibilities of an upcoming dip in textile activities, now seems a good time to re-emphasize the relationship between inventories and earnings presented last year before the annual convention of the American Cotton Manufacturers Institute.

Presented by representatives of the Arthur Anderson & Co. accounting firm, the report (T.B., April '59) cited findings obtained from a study made at Gaffney (S. C.) Mfg. Co., one of the print cloth mills in the Deering Milliken organization. The purpose of the study was to determine whether or not continuing statistical analysis of the mill's manufacturing and selling operations could bring about improved earnings by helping the mill better peg its productive facilities to market demands.

To quote from the report:

"At this time our principal conclusion shows that at Gaffney the odds of making a good profit are most in its favor if it will adopt the policy of not having one unsold yard of cloth in its inventory; if it will take the position that it will not normally manufacture any goods sold or unsold for inventory except to fill current delivery requirements of customers which generally will not require more than two weeks production at the mill; and generally that it should not build inventories for anticipated spot business or for anticipated future shortage in production. It should only carry these inventories if the system, which is based on a study of historical sales and price structure, shows that the odds of an expected profit at the time of sale of the goods are in the company's favor as compared with its cost of carrying the goods and the odds of an expected write-down. This will be a rare case."

In brief: Maximum profit comes with a minimum of inventory.

TEXTILE INDUSTRY SCHEDULE

Sept. 8-9 (Th-F)—Fall technical meeting, **TEXTILE QUALITY CONTROL ASSOCIATION**, The Clemson House, Clemson, S. C.

Sept. 8-9 (Th-F)—Annual meeting, **COMBED YARN SPINNERS ASSOCIATION**, The Cloister, Sea Island, Ga.

Sept. 15-16 (Th-F)—Textile Processing Symposium, **AMERICAN GAS ASSOCIATION**, Sedgefield Inn, Greensboro, N. C.

Sept. 15-16 (Th-F)—Annual outing, **CHATTANOOGA YARN ASSOCIATION**, The Read House, Chattanooga, Tenn.

Sept. 17 (Sa)—Family outing, **SOUTHERN TEXTILE OVERSEERS ASSOCIATION**, Greenwood, S. C.

Sept. 28-29 (W-Th)—The ninth annual **CHEMICAL FINISHING CONFERENCE**, sponsored by the National Cotton Council, Statler Hotel, Washington, D. C.

Sept. 28-30 (W-F)—Annual meeting, **NORTH CAROLINA TEXTILE MANUFACTURERS ASSOCIATION**, Carolina Hotel, Pinehurst, N. C.

Oct. 1 (Sa)—Fall meeting, **SOUTH CAROLINA DIVISION, SOUTHERN TEXTILE ASSOCIATION**, Brackett Hall, Clemson College.

Oct. 3-7 (M-F)—The 21st **SOUTHERN TEXTILE EXPOSITION**, Textile Hall, Greenville, S. C.

Oct. 6-8 (Th-Sa)—National convention, **AMERICAN ASSOCIATION OF TEXTILE CHEMISTS & COLORISTS**, Sheraton Hotel, Philadelphia, Pa.

Oct. 7 (F)—Annual meeting, **SOUTHERN TEXTILE OVERSEERS ASSOCIATION**, Hotel Greenville, Greenville, S. C. (6 P. M.)

Oct. 18-19 (Tu-W)—Technical Advisory Committee and Board of Trustees Meeting, **INSTITUTE OF TEXTILE TECHNOLOGY**, Charlottesville, Va.

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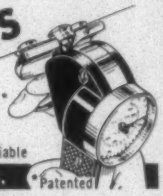
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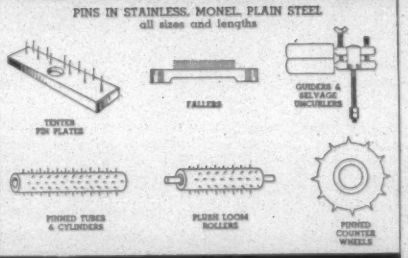
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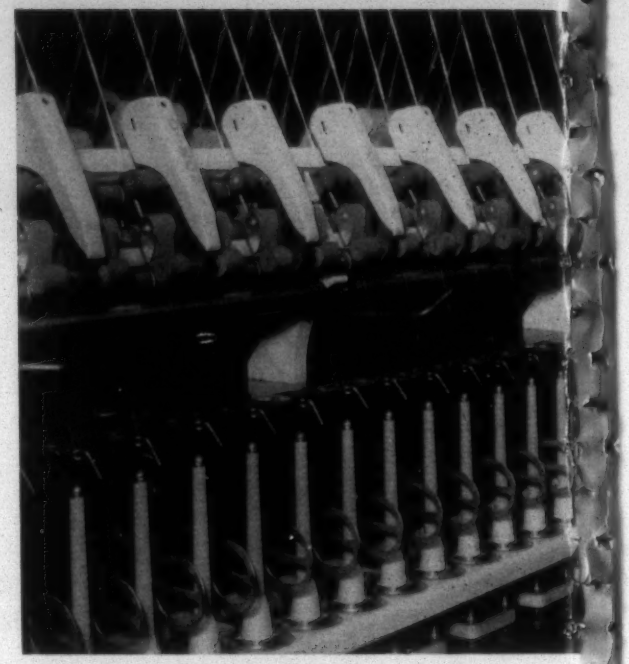
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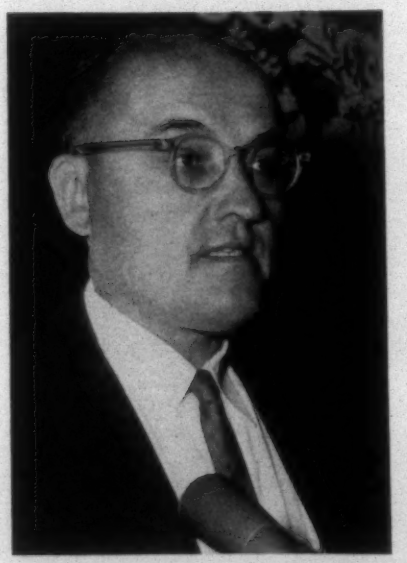
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Less than 8% of loom parts account for more than 80% of downtime!

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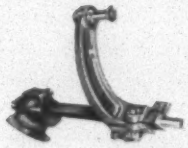
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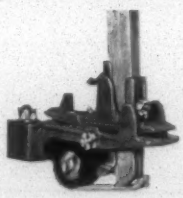
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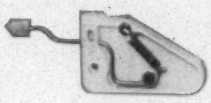
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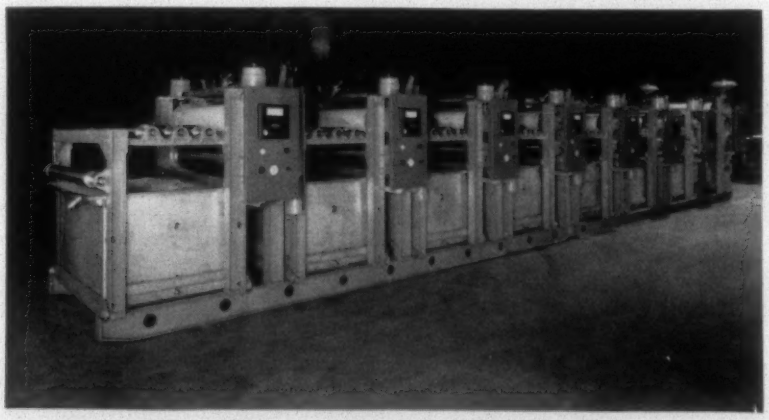
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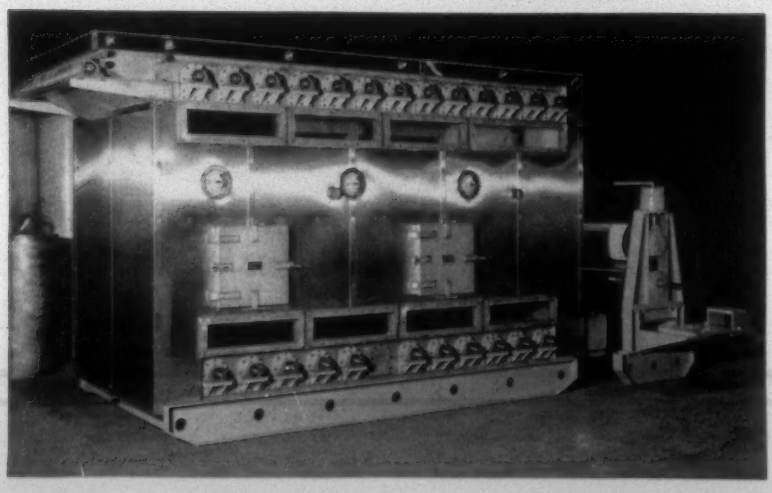


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